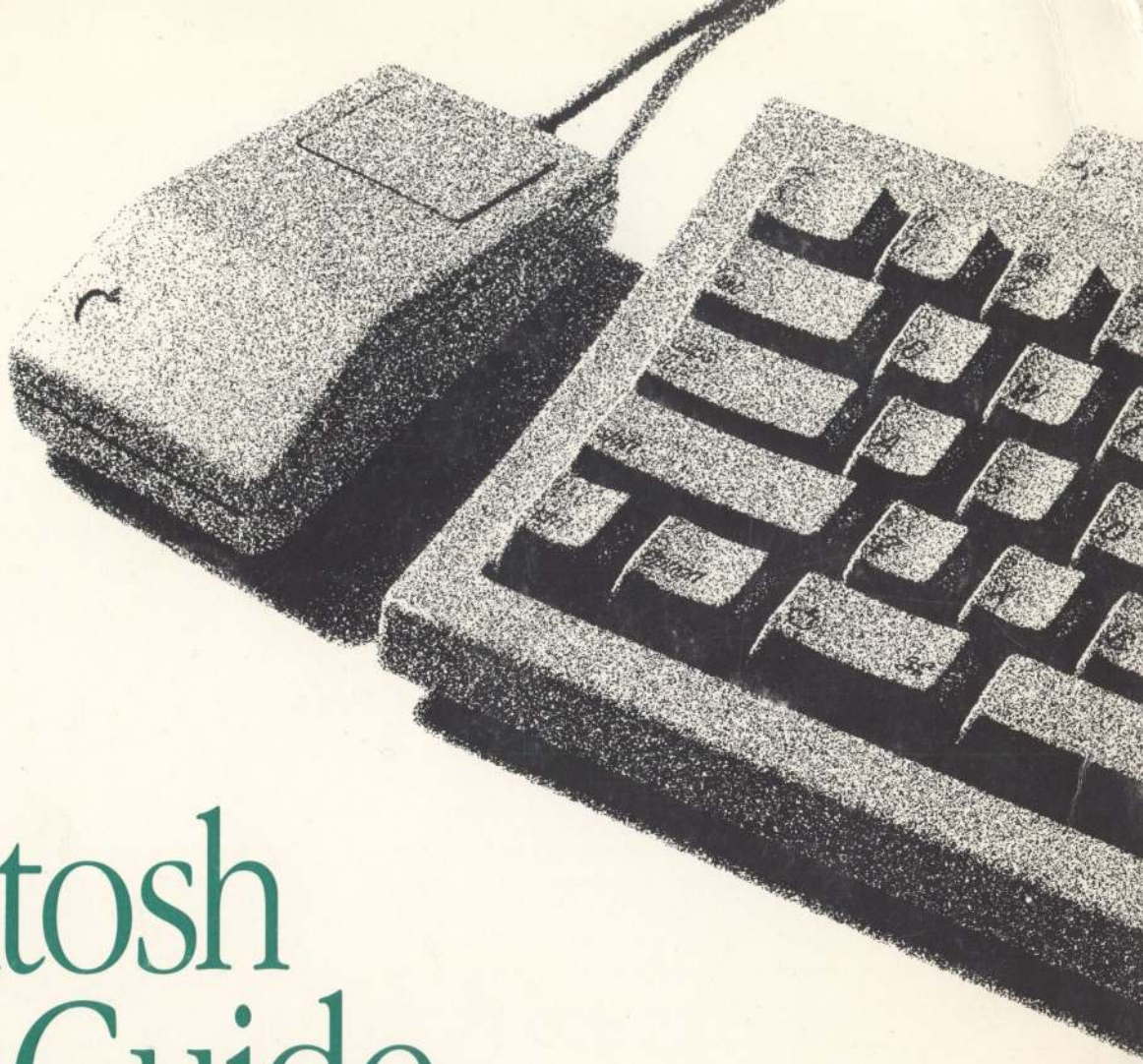

Macintosh User's Guide

for desktop Macintosh computers

Macintosh User's Guide for desktop Macintosh computers

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This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. See instructions if interference to radio or television reception is suspected.

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Macintosh User's Guide

for desktop Macintosh computers

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Radio and television interference

The equipment described in this manual generates, uses, and can radiate radio-frequency energy. If it is not installed and used properly—that is, in strict accordance with Apple's instructions—it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

You can determine whether your computer system is causing interference by turning it off. If the interference stops, it was probably caused by the computer or one of the peripheral devices.

If your computer system does cause interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the computer to one side or the other of the television or radio.
- Move the computer farther away from the television or radio.
- Plug the computer into an outlet that is on a different circuit from the television or radio. (That is, make certain the computer and the television or radio are on circuits controlled by different circuit breakers or fuses.)

If necessary, consult your authorized Apple dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet, prepared by the Federal Communications Commission: *Interference Handbook* (stock number 004-000-00345-4). This booklet is available from the U.S. Government Printing Office, Washington, DC 20402.

△ **Important:** Changes or modifications to this product not authorized by Apple Computer, Inc., could void the FCC Certification and negate your authority to operate the product.

This product was tested for FCC compliance under conditions that included the use of shielded cables and connectors between system components. It is important that you use shielded cables and connectors to reduce the possibility of causing interference to radios, television sets, and other electronic devices.

For Apple peripheral devices, you can obtain the proper shielded cables from your authorized Apple dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance. △

How to Use This Book

This book has two parts. Part I, *Learning Macintosh,* covers everything you need to know to begin using your Macintosh computer. Part II, *Macintosh Reference,* contains information that you may want as you become more proficient in using your Macintosh.

Go through Part I first if you are new to computers or new to the Macintosh. Read the chapters in sequence, from Chapter 1 to Chapter 7. When you're done with Part I, you can start learning the programs that you intend to use with your Macintosh.

Use Part II as you would a dictionary or encyclopedia: turn to it when you need specific information, and then read only those parts that give you that information—so you can go on with your work.

To find information in this book, use the index and the table of contents. Also, use the glossary and the summary, "Working on the Macintosh Desktop" (on the green pages after Chapter 16), if you're looking for short definitions or brief summaries of concepts and procedures.

If you need information on setting up your Macintosh or on features specific to your particular model, go to the setup book that came with your computer.

Use this book in combination with the setup book and the books and disks that came with your application programs to find the information you need. You can also find useful information through Balloon Help, a feature of your Macintosh system that is explained in Chapter 7.

Welcome to Macintosh.

Part

I

Part I

Learning Macintosh

Chapter 1 Turning the Macintosh On and Off

Chapter 2 Understanding the Desktop

Chapter 3 Setting Up Your Programs

Chapter 4 Creating a Document and Saving Your Work

Chapter 5 Changing a Document and Printing Your Work

Chapter 6 Organizing Your Work

Chapter 7 Learning More About Your Macintosh

Go through Learning Macintosh *if you are new to computers or new to the Macintosh computer. Read the chapters in sequence, from Chapter 1 to Chapter 7. Everything you need to know to begin using the Macintosh productively is covered in this part of the book.*

Before you use *Learning Macintosh,* you should have already

- set up your Macintosh according to the instructions in the setup book that came with your computer
- gone through the *Macintosh Basics* tour, supplied with your computer

When you're done with this part of the book, you can start learning the programs that you intend to use with your Macintosh. (Turn to the materials that came with the programs—all the skills you learn in *Learning Macintosh* will prove useful in any Macintosh program.)

For information that you may need as you become more proficient in using your Macintosh, go to Part II, *Macintosh Reference.*

To find information in this book, use the index and the table of contents. Also, use the glossary and the summary, "Working on the Macintosh Desktop" (on the green pages after Chapter 16), if you're looking for short definitions or brief summaries of concepts and procedures.

If you need information on setting up your Macintosh or any information on features specific to your particular model, go to the setup book that came with your computer.

Use this book in combination with the setup book and the books and disks that came with your application programs to find the information you need. You can also find useful information through Balloon Help, a feature of your Macintosh system that is explained in Chapter 7.

Chapter 1

Turning the Macintosh On and Off

In this chapter

You'll learn how to

- turn the Macintosh on and off

Also, you'll learn about

- the startup disk
- the Macintosh desktop

It will take about five minutes to go through this chapter.

Before you begin

You should have already

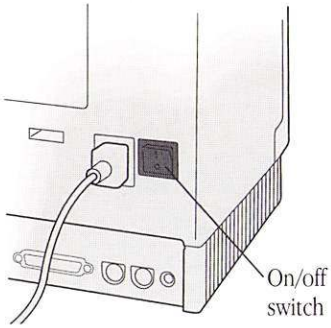
- set up your Macintosh according to the instructions in the setup book that came with your computer
- gone through the Macintosh Basics tour, supplied with your computer
- read the introduction to this section of the book (page 1)

Turn your computer on

How you turn on your Macintosh depends on which model it is. For specific information, go to the setup book that came with your computer.

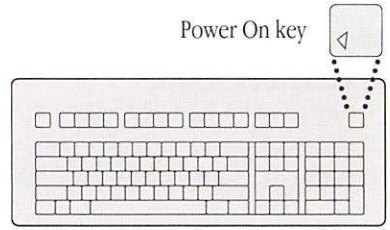
△ **Important:** If an external hard disk or other external devices are connected to your Macintosh, turn on those external devices before you turn on the Macintosh. △

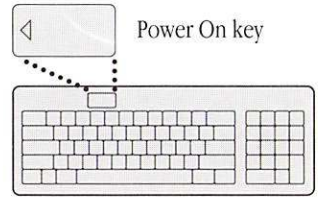
- If your Macintosh is the Macintosh LC or it does not have a separate monitor (like the Macintosh Classic), press the on/off switch on the back of your computer.



❖ *If the Macintosh LC monitor doesn't turn on,* make sure that the monitor's on/off switch is on. (If you don't know where the switch is, go to the manual that came with your monitor.) ❖

- If your computer is one of the Macintosh II models (such as the IIci or the IIfx), press the Power On key on your keyboard.





❖ *If the monitor doesn't turn on,* make sure that its on/off switch is on. (If you don't know where the switch is, go to the manual that came with your monitor.) ❖

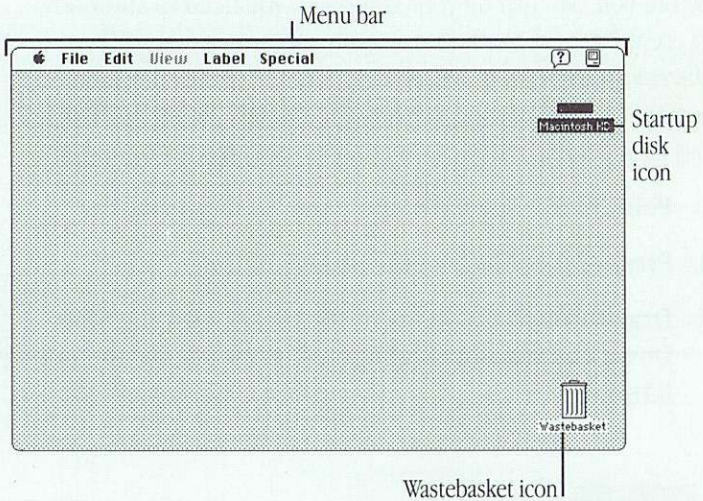
When you turn on your computer

The Macintosh looks for a startup disk, which is a disk that contains the information it needs to "start itself up." In your case, the startup disk is a hard disk that's inside or connected to your computer. When the Macintosh finds a startup disk, it displays the icon shown at left and proceeds to start itself up.

When your computer is done starting itself up, the screen displays the Macintosh "desktop." The desktop is a field of gray (or another color) with

- a menu bar across the top (containing the names and icons of menus)
- an icon near the upper-right corner representing the startup disk
- a Wastebasket icon near the lower-right corner

Chapter 2, "Understanding the Desktop," gives you more information on these features.



If the Macintosh doesn't find a startup disk, it displays this icon instead. In this case, you may need to prepare a startup disk or connect one to your computer. Go to Chapter 8 (in Part II of this book) or your setup book for instructions.

Turn your computer off

Before you can turn off your computer, you need to know how to use the mouse to choose a command from a menu. The *Macintosh Basics* tour lets you practice choosing commands. If you need more practice, go through the next chapter (Chapter 2) and then come back to this section to turn off your computer.

1. **Point to the Special menu name in the menu bar.**
2. **Press and hold down the mouse button.**
3. **Drag through the items in the menu until the Shut Down command is highlighted, then release the mouse button.**

- If your Macintosh does not have a separate monitor (like the Macintosh Classic), press the on/off switch on the back of the computer when a message on screen indicates that it's safe to do so.
- If your Macintosh is the Macintosh LC, press the on/off switch on the back of the computer when a message on screen indicates that it's safe to do so, and switch off the monitor as well.
- If your computer is a Macintosh II or a portable model, the computer and the monitor turn off by themselves.

△ **Important:** If an external hard disk or other external device is connected to your Macintosh, turn off those external devices after you turn off the Macintosh. △

Turn off your computer at the end of your work day or when you know you won't be using it for several hours.

What next?

Go to Chapter 2, where you'll learn how to work on the Macintosh desktop.

Chapter 2

Understanding the Desktop

In this chapter

You'll review how to

- use the mouse
- choose a command
- open an icon
- look at the contents of a window
- close a window

(The *Macintosh Basics* tour introduced you to these skills.)

You'll learn how to

- move a window

Also, you'll learn about

- using the keyboard

It will take about 30 minutes to go through this chapter.

Before you begin

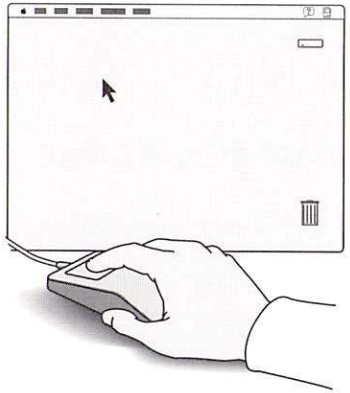
You should have already

- gone through Chapter 1

If you turned off the Macintosh at the end of Chapter 1, turn it back on now.

Use the mouse

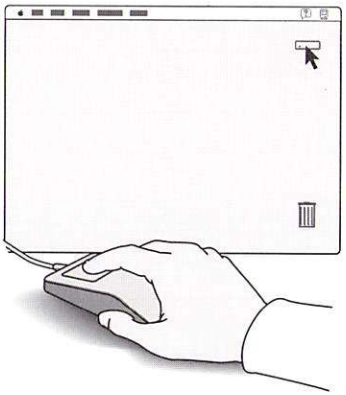
You use the mouse to control the movements of a pointer on screen. Usually, the pointer is an arrow that's set at an angle.



Much of the work you do on the Macintosh uses four mouse actions: pointing, clicking, pressing, dragging.

Point

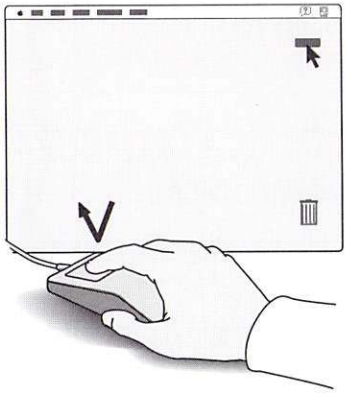
You point to an object on screen by moving the mouse so that the pointer is positioned on that object. When the pointer is an arrow, the *very tip* of the arrow must be *exactly* on the object.



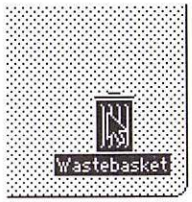
Practice by pointing to different objects on the Macintosh desktop, such as the startup hard disk icon near the upper-right corner, the Wastebasket icon near the lower-right corner, and the Help menu icon near the right corner of the menu bar.

Click

You click an object on screen by pressing and quickly releasing the mouse button while the pointer is on that object.



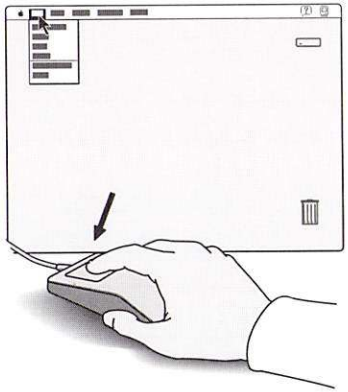
Practice by clicking different objects on the Macintosh desktop, such as the startup hard disk icon near the upper-right corner and the Wastebasket icon near the lower-right corner.



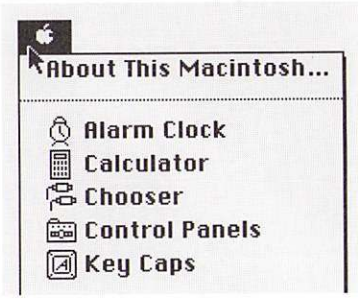
When you click an icon, it becomes *highlighted* (the icon is darkened), which means that it is *selected.* A selected icon is the object of whatever action you choose next.

Press

You press by holding down the mouse button without moving the mouse. Don't bear down on the mouse itself.

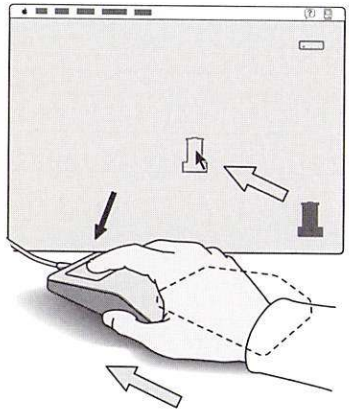


Practice by pressing the menu names and menu icons in the menu bar (start with the Apple menu icon in the left corner, through the menu names, and across to the Help and Application menu icons in the right corner). Pressing a menu name or icon "pulls down" the menu. Read the items in each menu you pull down.



Drag

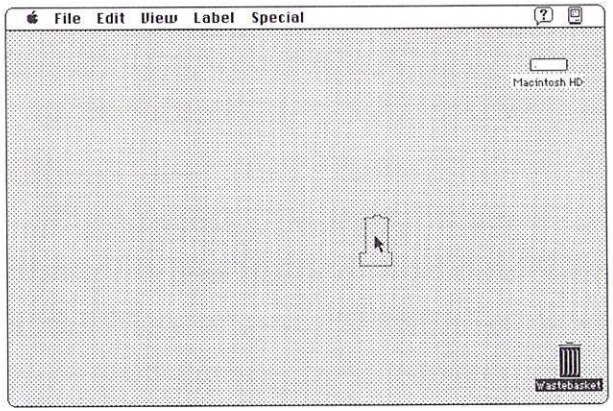
You drag an object on screen by pointing to that object and holding down the mouse button while you move the mouse.



How to hold the mouse

- You can use the mouse with either hand. Most people prefer to use it with their dominant hand (the right if they're right-handed, the left if they're left-handed). If you want to switch mouse positions, go to the setup book that came with your computer.
- Keep the heel of your hand on your desk. (Your arm will tire quickly if you hold your hand up in the air.)
- Lightly rest your index and middle fingers on the mouse button.
- Make sure that the mouse cable is pointing away from you.

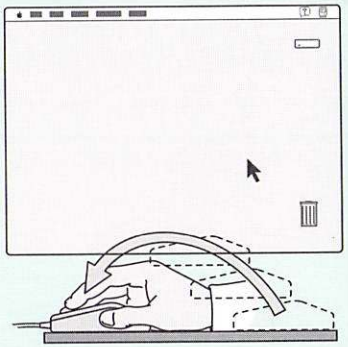
Practice by dragging the startup hard disk icon and the Wastebasket icon around the Macintosh desktop. Make sure you return the icons close to their original positions.



When you drag an icon, an outline of the icon follows the pointer on the screen. When you release the mouse button, the icon itself moves.

When you move the mouse

- Glide the mouse over the surface of your desk. Don't press down on it.
- If you run out of room on your desk as you're moving the mouse, pick it up and put it down where there's more room. When you pick up the mouse, the pointer on screen does not move, or does so only slightly.



Choose a command

Choosing a command involves a combination of the mouse actions you've reviewed.

1. **Point to the Special menu name in the menu bar.**
2. **Press to pull down the Special menu.**
3. **Drag to the first item in the menu (the Clean Up Desktop command) so that it is highlighted, then release the mouse button.**

When you choose the Clean Up Desktop command, the startup hard disk icon and the Wastebasket icon return exactly to the positions they occupied when you first turned on the computer (as long as they're already close to their original positions).

When you talk to your Macintosh

Talking Macintosh always involves two steps:

1. selecting an object on the screen, and
2. choosing the action you want to perform on the object.

An icon or a window on the Macintosh desktop, text in a word-processing program, a picture in a graphics program—all of these are objects that you can select.

The actions you choose to perform on a selected object are usually commands (like the Open command), but you can also perform actions directly using the mouse (like dragging an icon).

When you select an object, you're telling the Macintosh to act upon that object.

Talking Macintosh is like using a very simple language with only two kinds of words:

- nouns (the objects), and
- verbs (the actions)

and with only one rule to remember:

- First the noun, then the verb (to this object, do that action).

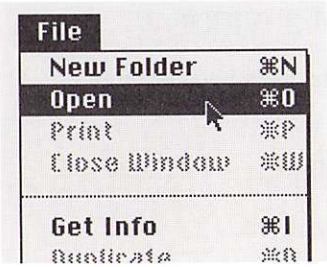
Open an icon

Opening an icon is your first exercise in "talking Macintosh": telling your computer what you want it to do.

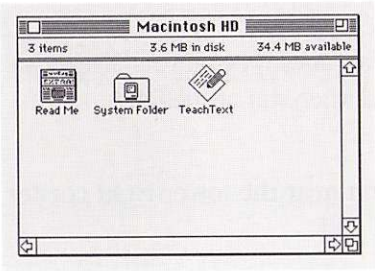
1. **Click the startup hard disk icon (unless it's been changed, it should be named "Macintosh HD") near the upper-right corner of the screen to select it.**

   Make sure that the icon is highlighted (darkened), which means that it's selected.

2. **Point to the File menu name in the menu bar.**
3. **Press to pull down the File menu.**
4. **Drag to the Open command (the second item in the File menu) so that it is highlighted, then release the mouse button.**



When you choose the Open command, the selected icon (in this case, the Macintosh HD icon) opens into a window (the Macintosh HD window). The icon itself becomes filled in with a pattern of dots, indicating that it has been opened.



Look at the contents of a window

Every window has several features that help you view the window's contents. You can

- make the window bigger or smaller
- move any hidden contents into view

Before you work with the contents of a window, you need to make that window the active window.

Make a window the active window

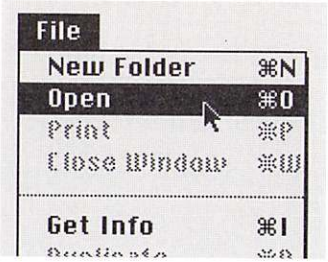
You can have several windows on screen, but only one window at a time can be the active window.

The Macintosh HD window should already be on your Macintosh desktop. (The window appeared when you opened the Macintosh HD icon.)

1. **Click the Wastebasket icon near the lower-right corner of the screen to select it.**

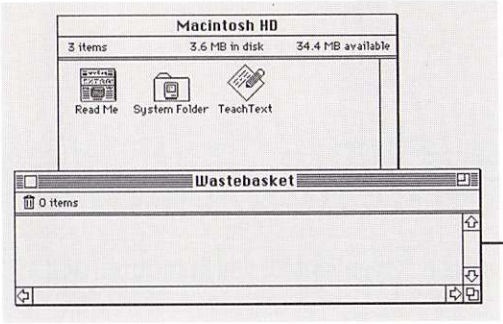
   Make sure that the icon is highlighted, which means that it's selected.

2. **Point to the File menu name in the menu bar.**
3. **Press to pull down the File menu.**
4. **Drag to the Open command (the second item in the File menu) so that it is highlighted, then release the mouse button.**



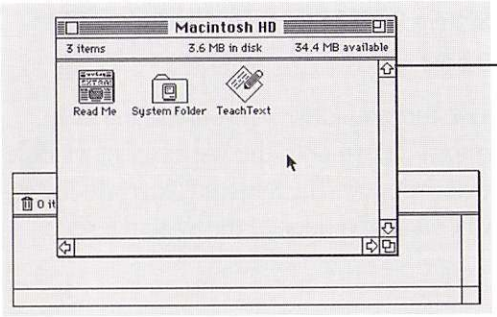
When you choose the Open command, the selected icon (in this case, the Wastebasket icon) opens into a window (the Wastebasket window). The icon itself becomes filled in with a pattern of dots, indicating that it has been opened.

You should now have two windows on your Macintosh desktop: the Macintosh HD window and the Wastebasket window. The Wastebasket window is the active window because you opened the Wastebasket icon most recently.



5. **Click anywhere in the Macintosh HD window to make it the active window.**

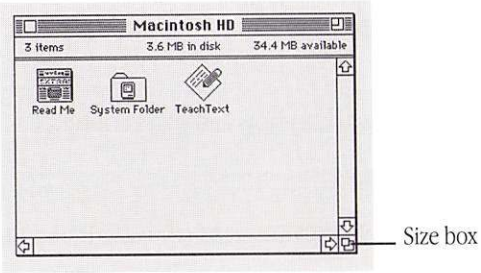
   The active window is the one with solid lines across the top (the title bar), on either side of its title. When windows overlap, the active window is the one that's on top.



Make a window bigger or smaller

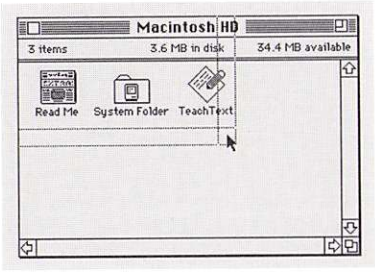
You can change a window's size by dragging its *size box* or by clicking its *zoom box*.

1. **With the Macintosh HD window the active window, point to the size box in the lower-right corner of the window.**



2. **Drag the size box in any direction, then release the mouse button.**

   An outline indicates the window's new size. The outline follows the pointer as you drag. You can drag in any direction to make the window bigger or smaller, wider or narrower.



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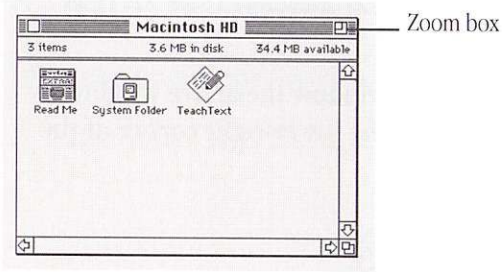
3. **Click the zoom box near the right end of the title bar.**



The window "zooms" to a size that shows all of its contents.

4. **Click the zoom box again.**

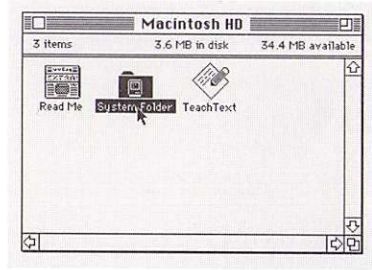
The window zooms back to its previous size (the size that you changed it to in step 2).

Clicking the zoom box is a quick way to view as much of a window's contents as your screen size allows.

Move the hidden contents of a window into view

Without changing the size of the window, you can view any contents that are currently out of sight by using the window's *scroll bars* and *scroll arrows.*

1. **With the Macintosh HD window the active window, click the System Folder to select it.**



Make sure that the icon is highlighted, which means that it's selected.

2. **Point to the File menu name in the menu bar.**

3. **Press to pull down the File menu.**

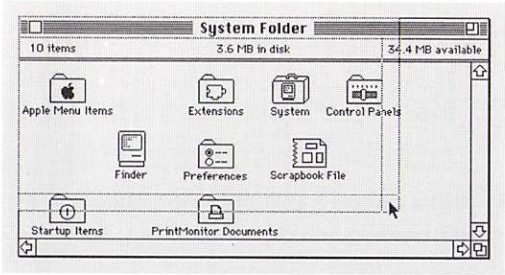
4. **Drag to the Open command (the second item in the File menu) so that it is highlighted, then release the mouse button.**

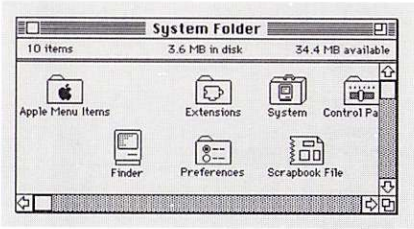
When you choose the Open command, the selected icon (in this case, the System Folder) opens into a window (the System Folder window).

You should now have three windows on your Macintosh desktop: the Macintosh HD window, the Wastebasket window, and the System Folder window. The System Folder window is the active window because you opened the System Folder last.

5. **Point to the size box in the lower-right corner of the System Folder window.**

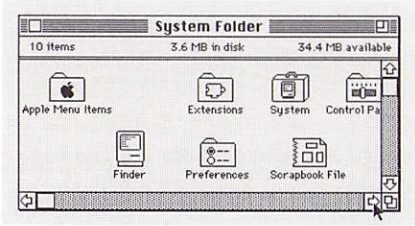
6. **Drag the size box diagonally to make the window smaller (about half its current size), then release the mouse button.**





The bars across the bottom (the horizontal scroll bar) and along the right (the vertical scroll bar) of the System Folder window should now be gray, indicating that the window has contents that you cannot see at its current size.

7. **Press the right scroll arrow at the right end of the horizontal scroll bar.**



The contents of the window scroll past, bringing into view the icons that had been out of sight and to the right.

The scroll box moves to the right across the bar, showing what part of the window's contents you're looking at.

8. **Press the left scroll arrow at the left end of the horizontal scroll bar.**

The contents of the window scroll past, bringing back into view the icons that had been out of sight and to the left.

The scroll box moves to the left across the bar, showing what part of the window's contents you're looking at.

continues ▶

What's on the desktop?

The Macintosh desktop is a field of gray (or another color) with a menu bar across the top, an icon near the upper-right corner representing the startup disk, and a Wastebasket icon near the lower-right corner.

The desktop is your work space on the computer—as the top of a wooden desk is a work space. It gives you a familiar way of thinking about how to use the Macintosh.

Aside from the field of gray (the "surface" of your work space), the Macintosh desktop has icons, windows, and menus.

- Icons represent containers.
- Windows let you view the contents of containers.
- Menus offer you actions that you apply to selected containers (or their contents).

Icons represent containers

You can think of icons as containers. Icons can contain other icons, or they can contain information.

For example, the startup disk icon near the upper-right corner of the desktop contains the System Folder icon. The System Folder icon contains the programs and other files (more icons) that contain the information the Macintosh needs to start itself up.

Several types of icons represent different types of containers.

Hard disks and floppy disks are like filing cabinets. You use disks to store files—programs you use and documents you create.

Hard Disk

Floppy Disk

Shared disks are like filing cabinets containing office supplies or records that you share with others in your work group. Your Macintosh needs to be connected to a network before you can use shared disks.

NetMart

Community Communiqué

Shared Disk

Iduna Stacks

Folders are like folders in a file drawer. You use folders to organize your files.

System Folder

Manila Folder

June Letters

House Plans

Mailing Lists

Programs are files containing instructions to the computer that let you do certain types of work.

TeachText

SketchPad

MemoMaker

BeanCounter

Documents are files containing words, pictures, numbers, sounds—whatever you create using programs.

Kitchen plans

Rough sketch

Sandino

Invitation

Memo

State Budget

The Wastebasket is a container for files that you no longer want or need.

Wastebasket

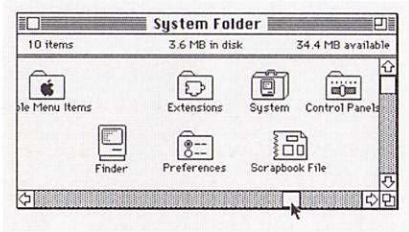
Windows let you view the contents of containers

Windows let you see what's "inside" all of these containers. When you open a disk icon, the window that appears shows you what's on the disk. When you open a document icon and the document is a memo, for example, the window that appears lets you see the memo.

Menus offer you choices

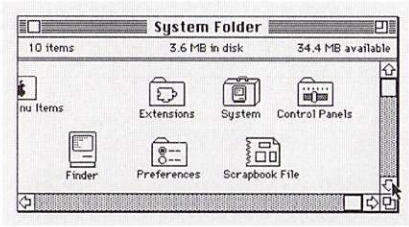
Like the menus in a restaurant, Macintosh menus let you choose. You choose among different actions that the computer can perform on containers (icons) or the contents of containers (words in a memo) that you've selected.

9. **Drag the scroll box toward the middle of the horizontal scroll bar, then release the mouse button.**



Now you see the icons near the middle of the window.

10. **Press the down scroll arrow at the bottom end of the vertical scroll bar.**



The contents of the window scroll past, bringing into view the icons that had been out of sight and toward the bottom.

The scroll box moves down along the bar.

11. **Press the up scroll arrow at the top end of the vertical scroll bar.**

The contents of the window scroll past, bringing into view the icons that had been out of sight and toward the top.

The scroll box moves up along the bar.

12. **Drag the scroll box toward the middle of the vertical scroll bar, then release the mouse button.**

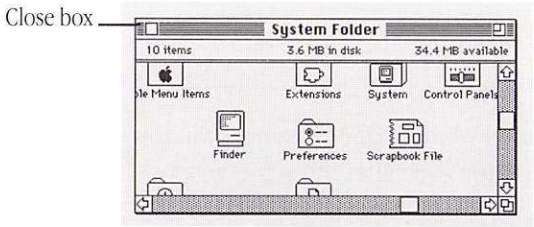
Now you see the icons near the middle of the window.

△ **Remember:** Changing the size of a window or moving the contents of a window does *not* change its contents. The contents remain the same; only what you see of the contents changes. △

Close a window

When you no longer need to see the contents of a window, you can close it by clicking the close box.

1. **With the System Folder window the active window, point to the close box near the left end of the title bar.**



2. **Click the close box.**

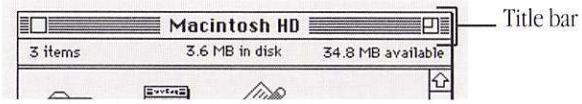
   The window closes, and the System Folder icon is no longer filled in with a pattern of dots, indicating that it is not open.

   You should have two windows on the Macintosh desktop: the Macintosh HD window, which is now the active window, and the Wastebasket window.

Move a window

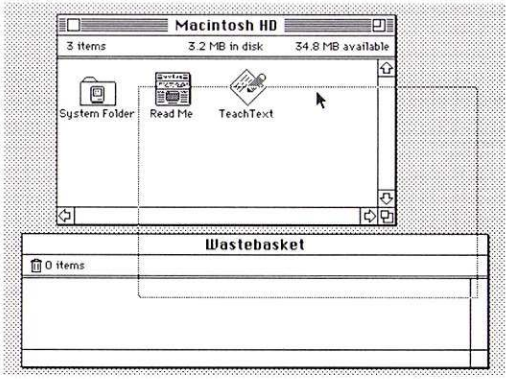
You can move a window anywhere on screen by dragging its title bar. By changing the position and the size of windows, you can arrange windows in any way that works best for you.

1. **Point to the title bar of the Macintosh HD window (anywhere on the title bar except the close box or the zoom box).**



2. **Drag the title bar in any direction, then release the mouse button.**

   When you drag a window's title bar, an outline of the window follows the pointer on screen. When you release the mouse button, the window itself moves to the position of the outline.



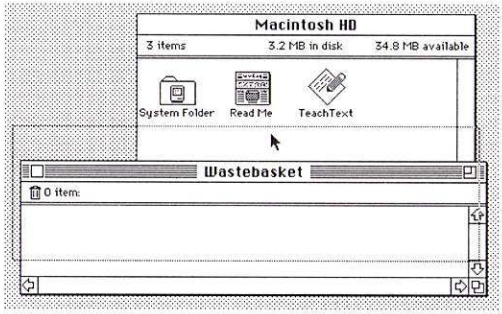
continues ▶

3. **Click anywhere in the Wastebasket window to make it the active window.**

4. **Point to the title bar of the Wastebasket window (anywhere on the title bar except the close box or the zoom box).**

5. **Drag the title bar in any direction, then release the mouse button.**

   Notice that the Wastebasket window, because it is the active window, stays on top of the Macintosh HD window if the two windows overlap.



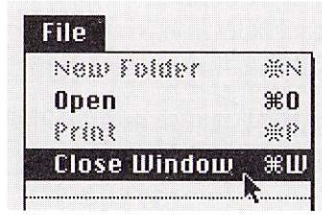
6. **Click anywhere in the Macintosh HD window to make it the active window.**

7. **Close the Macintosh HD window by clicking the close box near the left end of the window's title bar.**

   The window closes, and the Macintosh HD icon is no longer filled in with a pattern of dots, indicating that it is not open.

   The Wastebasket window (the remaining window on the Macintosh desktop) becomes the active window.

8. **Close the Wastebasket window by choosing Close Window from the File menu.**



   You choose Close Window by pointing to the File menu name, pressing to pull down the menu, dragging to the Close Window command, and, with the command highlighted, releasing the mouse button.

   Of course, you can also close the window by clicking its close box.

When to use the keyboard

You use the keyboard to type text and numbers, of course, as you would on a typewriter. (For touch typists, Macintosh keyboards have raised dots in the middle of the D key and the K key to help position your fingers on the home row.)

Depending on the program you're using, you can use special keys on the keyboard to give commands to the computer and to replace or change the effect of certain mouse actions. Macintosh keyboards have three types of special keys: modifier keys, arrow keys, and function keys (Chapter 5 gives you examples of how to use these special keys).

Modifier keys

All Macintosh keyboards have four modifier keys: Shift, ⌘ (Command), Option, and Control.

Pressed by itself, a modifier key does nothing. You need to press it in combination with another key (or while using the mouse). The modifier key "modifies" the other key or the mouse action, giving a different result.

You type a capital letter, for example, by pressing the Shift key with a letter key. Most programs let you give commands by pressing the ⌘ key with certain letter keys.

Arrow keys

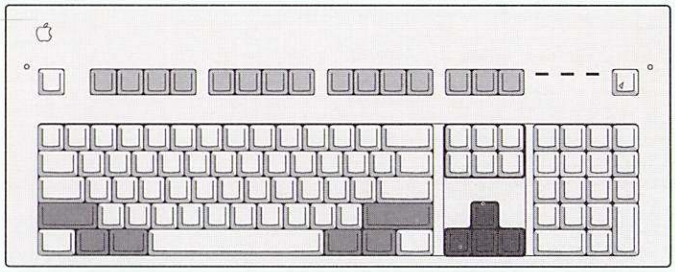
All Macintosh keyboards have four arrow keys: Up Arrow, Down Arrow, Left Arrow, and Right Arrow.

Many programs let you use the arrow keys as well as the mouse to control the movements of the pointer on screen.

Function keys

Extended Macintosh keyboards have a row of function keys across the top of the keyboard.

Some programs let you give commands, or a sequence of commands, by pressing certain function keys.



Modifier keys Function keys Arrow keys

What next?

Go to Chapter 3, where you'll learn how to set up your programs, or take a break. Remember to turn off your Macintosh if you'll be away for more than a few hours.

Chapter 3

Setting Up Your Programs

In this chapter

You'll learn how to

- insert a floppy disk
- initialize a disk
- copy the contents of a disk
- take a floppy disk out of its drive
- safeguard the contents of a disk
- use the Wastebasket

You'll also learn about

- types of floppy disks
- the difference between hard disks and floppy disks
- caring for floppy disks

And you'll learn more about

- the startup disk and the System Folder

It will take about 40 minutes to go through this chapter.

Before you begin

You should have already

- gone through Chapters 1 and 2

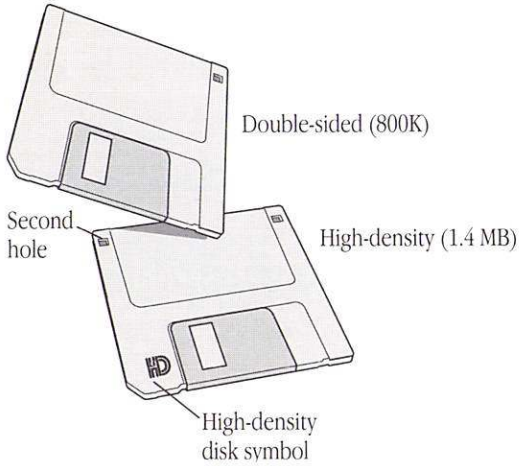
Also, you need

- a new floppy disk

If you turned off the Macintosh at the end of Chapter 2, turn it back on.

Insert a floppy disk

You should be able to get floppy disks from wherever you got your Macintosh. The 3.5-inch (89-millimeter) floppy disks that fit in your Macintosh computer's SuperDrive come in two types: high-density and double-sided. Your Macintosh uses either type.

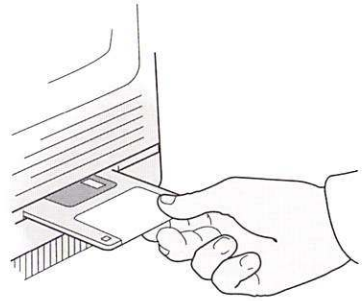


Some older Macintosh models, however, do not have the SuperDrive floppy disk drive and cannot properly use high-density disks.

1. **Write "Practice" on a blank disk label.**
2. **Affix the label onto your new floppy disk.**

   How the label goes onto the floppy disk is apparent from the molding of the disk's protective plastic case. Do not affix the label over the metal shutter.

3. **Hold the disk between thumb and forefinger, with your thumb on the label and the metal shutter pointing away from you.**
4. **Push the disk into the computer's SuperDrive, label side up and metal shutter first, until the SuperDrive pulls the disk in the rest of the way.**



Why a floppy disk isn't floppy

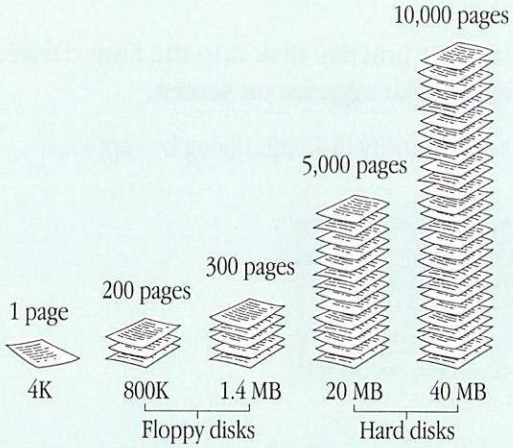
A floppy disk is made of thin, flexible material with a magnetic coating. To protect it and to make it easier to handle, the floppy disk itself is enclosed in a rigid plastic case, which gives the floppy disk its "non-floppy" character.

A metal shutter on the plastic case allows access to the floppy disk, which carries information in the form of magnetic signals. The shutter moves out of the way when you insert the floppy disk in a disk drive.

You can use either of two types of 3.5-inch (89-millimeter) floppy disks in your computer's SuperDrive: high-density and double-sided.

❖ *If you use another Macintosh:* Some older Macintosh computers may not have the SuperDrive floppy disk drive and therefore cannot use high-density disks. Use only double-sided disks on these older Macintosh computers. ❖

High-density disks can hold 1.4 megabytes (MB) of information (about 300 typewritten pages). Double-sided disks can hold 800 kilobytes (K) of information (about 200 typewritten pages). (One thousand twenty-four kilobytes make a megabyte.)



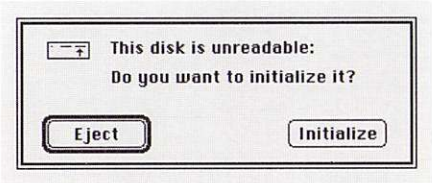
Floppy disks are also called *diskettes.*

Initialize a disk

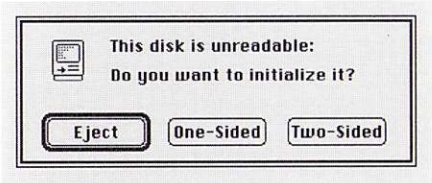
Before you can use a new floppy disk, you need to prepare it so that the computer knows where to store and retrieve information on the disk. Preparing a disk is called *initializing*. Initializing a disk is like drawing the lines on a newly paved parking lot: you don't know what fits where until you figure out how much room you have.

1. **After you insert your practice disk into the SuperDrive, read the dialog box that appears on screen.**

   If you inserted a high-density disk, this dialog box appears:

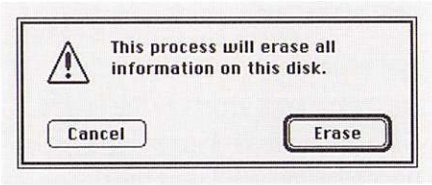


   If you inserted a double-sided disk, this dialog box appears:



2. **Depending on which dialog box appears, click Initialize or Two-Sided.**

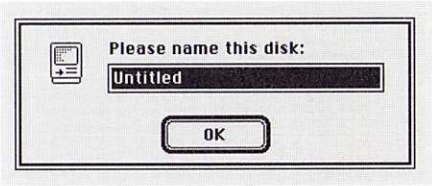
   Another dialog box appears:



   This dialog box gives you one last chance to cancel. It alerts you that you're about to erase—and therefore lose—any information that may be on the floppy disk. In this case, because the floppy disk is new, you have no information to lose.

3. **Click Erase.**

   A third dialog box appears:



4. **Type "Practice".**

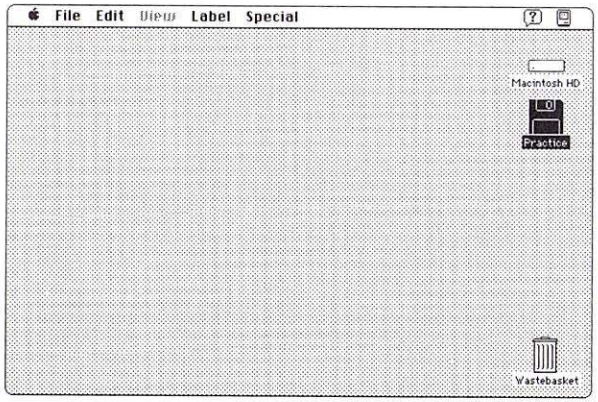
   If you make any typing errors, press the Delete key to backspace over them.

   When you name a disk, you can type up to 27 characters, including spaces. You cannot use a colon (:) in the name.

5. **Click OK.**

   The computer takes about a minute to initialize the disk. A series of messages appears on the screen to let you know how the process is going.

   When the computer is done initializing the floppy disk, the disk's icon appears on the Macintosh desktop directly below the Macintosh HD icon (the startup hard disk icon) near the upper-right corner.

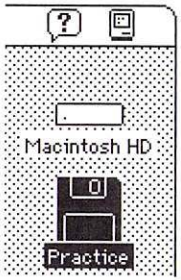


Copy the contents of a disk

Most programs you get are supplied on one or more floppy disks. You can more efficiently use a program if you first *install* it on your hard disk (copy it from its floppy disk to your hard disk).

To practice copying the contents of a floppy disk to your startup disk, use your practice disk (even if there's nothing on it).

1. **Make sure that the Practice floppy disk icon is selected. If it isn't, click the icon (not its name).**



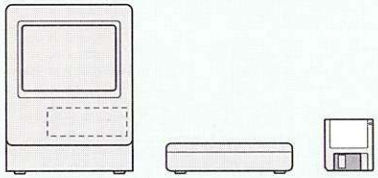
continues ▶

Floppy disks, hard disks, and startup disks

Both floppy disks and hard disks function like filing cabinets: you store files in them. The differences between floppy disks and hard disks are in how much information they can store, how quickly you can retrieve information from them, and how easily you can carry them around.

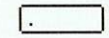
You can store much more information on a hard disk and retrieve it much faster than you can on a floppy disk.

And while you can carry a floppy disk in your shirt pocket, a hard disk is sealed in a hard disk drive, which is installed inside the computer or enclosed in a plastic box that's connected to the computer.



Internal hard disk | External hard disk | Floppy disk

You can tell whether a disk is a floppy disk or a hard disk by looking at its icon on the desktop.



Hard Disk

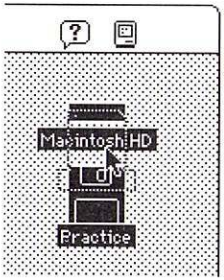
Floppy Disk

The disk whose icon appears near the upper-right corner is the startup disk, which contains the information that the Macintosh uses to start itself up.

That "startup" information is contained in programs and other files that are in the System Folder on the startup disk. The startup disk must have only one System Folder. If it has more than one, the computer becomes confused about where to get the information it needs to start up and run, with unpredictable—and undesirable—results.

2. **Drag the Practice floppy disk icon to the Macintosh HD icon until both icons are highlighted, then release the mouse button.**

   Both icons are highlighted when the tip of the arrow pointer reaches the Macintosh HD icon as you drag the Practice floppy disk icon.



   When you release the mouse button, the Macintosh copies the contents of the Practice floppy disk onto Macintosh HD (your startup hard disk). The copy is in a folder named Practice, which is now on Macintosh HD.

3. **Click the Macintosh HD icon to select it.**

4. **Choose Open from the File menu.**

   You choose Open by pointing to the File menu name, pressing to pull down the menu, dragging to the Open command so that it's highlighted, and releasing the mouse button.

   The Macintosh HD window appears, showing you the contents of the startup hard disk. The contents should include a new folder called Practice, which the computer created when it copied the contents of the Practice floppy disk to Macintosh HD.

   You may have to make the window bigger or use the scroll bars to find the Practice folder.

5. **Click the Practice folder to select it.**

6. **Choose Open from the File menu.**

   You choose Open by pointing to the File menu name, pressing to pull down the menu, dragging to the Open command so that it's selected, and releasing the mouse button.

   The folder holds the contents of the floppy disk you've copied (in this case, the folder contains nothing because there's nothing on the Practice disk).

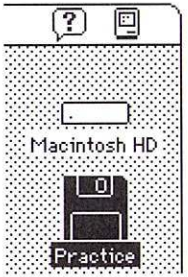
7. **Close all the windows you have on the Macintosh desktop.**

   You close a window (when it's the active window) by either clicking its close box or choosing Close Window from the File menu.

Take a floppy disk out of its drive

While there's only one way to insert a floppy disk into the SuperDrive, there's more than one way to take it out. Here is the best way:

1. **Make sure that the Practice floppy disk icon is selected. If it's not selected, click it.**



2. **Eject the floppy disk by choosing Put Away from the File menu.**

You choose Put Away by pointing to the File menu name, pressing to pull down the menu, dragging to the Put Away command so that it's highlighted, and releasing the mouse button.

Put Away puts the object you've selected back in its place (in this case, it allows you to remove the floppy disk from the disk drive and put it away).

Safeguard the contents of a disk

You can lock a disk so that its contents cannot be changed in any way. When a disk is locked, you cannot change the files that are on it, delete any files, or store additional files.

To practice locking and unlocking a floppy disk, use your practice disk.

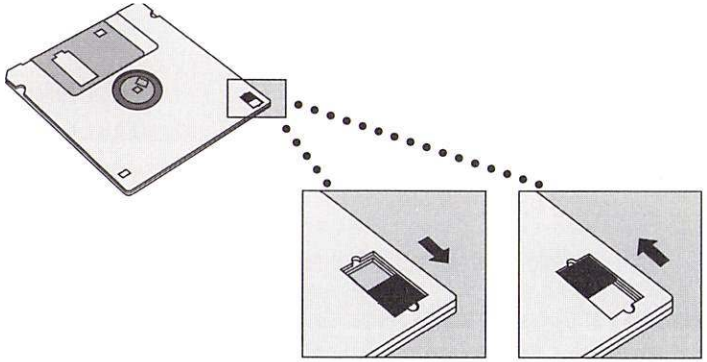
1. **Hold the practice disk between thumb and forefinger, with your thumb on the label and the metal shutter pointing away from you (as if you were going to insert the disk into a drive).**

2. **Find the square hole in the near-left corner of the floppy disk.**

   A moveable tab on the back side of the disk should be blocking the hole, indicating that the disk is unlocked.

❖ *If you're using a high-density floppy disk:* You'll notice an additional square hole, across the label from the first hole. This second hole has no moveable tab and is always open. ❖

3. **Turn the disk over and lock the disk by sliding the tab on the back side of the disk so that the square hole is open.**



Locked Unlocked

   Use your thumbnail or a push pin to move the tab.

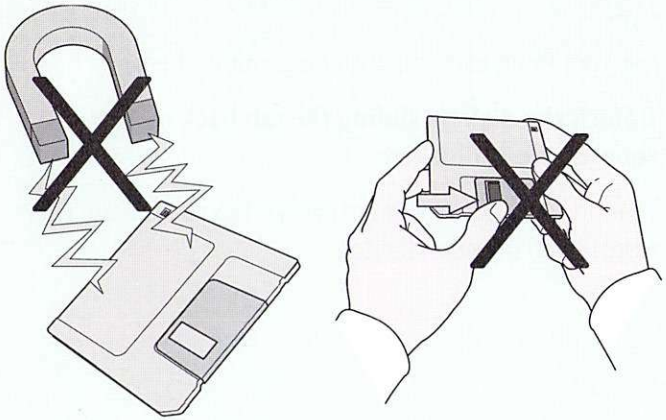
4. **Unlock the disk by sliding the tab back so that the square hole is blocked.**

   Your practice disk should be unlocked so you can use it to store files in the next chapter.

Taking care of floppy disks

Follow the instructions about care and maintenance that came with your disks. At minimum, remember these three points:

- Keep the disks away from magnets. Information on the disks is in the form of magnetic signals, so a magnetic field can destroy that information. Televisions and monitors, telephones, loudspeakers, and certain kinds of lighting fixtures all have magnets.
- Protect disks from extremes of temperature and humidity.
- Do not open the disk's metal shutter. Touching the disk inside the shutter could damage it.



Use the Wastebasket

When you no longer need or want a file or folder, you throw it away by dragging its icon to the Wastebasket. (A file can be either a document or a program.) Practice using the Wastebasket by throwing away the Practice folder, which you created when you copied the contents of your Practice disk onto Macintosh HD.

1. **Click the Macintosh HD icon to select it.**
2. **Choose Open from the File menu.**

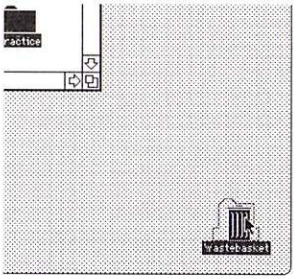
   You choose Open by pointing to the File menu name, pressing to pull down the menu, dragging to the Open command so that it's highlighted, and releasing the mouse button.

   The Macintosh HD window appears, showing you the contents of the startup hard disk. The contents should include the Practice folder.

   You may have to make the window bigger or use the scroll arrows to find the Practice folder.
3. **Click the Practice folder icon to select it.**

4. **Drag the Practice folder icon to the Wastebasket icon until both icons are highlighted, then release the mouse button.**

   Both icons are highlighted when the tip of the arrow pointer reaches the Wastebasket icon.



   When you release the mouse button, the Practice folder "disappears" into the Wastebasket. When you put a file or folder in the Wastebasket, the Wastebasket icon bulges to indicate that it is no longer empty.

5. **Open the Wastebasket icon.**

   You open an icon by clicking it to select it and then choosing Open from the File menu.

   When you open the Wastebasket icon, the Wastebasket window appears. The Practice folder you've just thrown away is in the window. Anything you put in the Wastebasket stays there until you empty the Wastebasket.

   You can put anything that's in the Wastebasket back where it was by clicking it to select it and then choosing Put Away from the File menu. (Or you can drag it back where it was.)

6. **Choose Empty Wastebasket from the Special menu.**

   A dialog box appears asking you to confirm that you want to permanently remove the contents of the Wastebasket. If you change your mind, you can click the Cancel button.

   Clicking OK empties the Wastebasket, and you lose anything that's in it.

7. **Click the OK button.**

   Notice that the Wastebasket icon no longer bulges, indicating that it is empty.

8. **Close the Wastebasket window by clicking its close box.**

On your own: Install your programs

If you have any disks containing programs (such as word processing or graphics) that you plan to use on your Macintosh, install the programs now on your hard disk. If you do not have any program disks yet, go to the next chapter.

△ **Important:** Some programs need to be installed in a specific way, so follow the instructions that came with each program. △

If a program didn't come with specific installation instructions, these general instructions tell you how to copy the contents of a program disk to your startup disk:

1. **Lock the program disk.**

   The program disk contains your master copy of the program. Locking the disk protects its contents but doesn't keep you from copying the contents onto another disk.

2. **Insert the program disk into the floppy disk drive.**

3. **Drag the program disk icon to the Macintosh HD icon (your startup hard disk icon) until both icons are highlighted, then release the mouse button.**

   Both icons are highlighted when the tip of the pointer arrow reaches the Macintosh HD icon as you drag the program disk icon.

   When you release the mouse button, a series of messages briefly appears on screen to let you know that the computer is copying the contents of the program floppy disk onto Macintosh HD. The copy is in a folder on Macintosh HD with the same name as the program disk.

4. **Eject the program disk by making sure it's selected and then choosing Put Away from the File menu.**

5. **If the Macintosh HD window is not on the desktop, open the Macintosh HD icon.**

   When you open the Macintosh HD icon, the Macintosh HD window appears, showing you the contents of your startup hard disk. Among its contents is the program folder holding the contents of the disk you've copied.

6. **Click the program folder to select it.**

7. **Choose Open from the File menu.**

   The folder window appears, showing the contents of the program folder. The folder has the same contents as the program disk.

8. **Look for a System Folder in the program folder.**

   Some program disks have a System Folder (so they can be used as startup disks). If the program disk you've copied has a System Folder, you now have two System Folders on Macintosh HD.

Throw away extra System Folders

Your startup disk must have only one System Folder. Whenever you copy the contents of a program disk to your startup hard disk, check to see that you have not copied an extra System Folder. If you have, throw away the extra System Folder.

1. **Drag the extra System Folder to the Wastebasket in the lower-right corner of the screen until both icons are highlighted, then release the mouse button.**

2. **Choose Empty Wastebasket from the Special menu.**

   A dialog box alerts you that you're about to throw away—permanently—the contents of the Wastebasket (in this case, the extra System Folder).

3. **Click OK to confirm that you want to throw away the contents of the Wastebasket.**

4. **Close the program folder window by clicking its close box.**

What next?

Go to Chapter 4, where you'll learn how to create a document. Or take a break. Remember to turn off your Macintosh if you'll be away for more than a few hours.

Chapter 4

Creating a Document and Saving Your Work

In this chapter

You'll review how to

- open a program
- create a document in a program
- save your work
- switch programs
- close a document

(The *Macintosh Basics* tour introduced you to these skills.)

You'll also learn about

- what happens when you open a program icon
- why it's important to save your work
- the difference between application programs and system software

It will take about 30 minutes to go through this chapter.

Before you begin

You should have already

- gone through Chapters 1 through 3

If you turned off the Macintosh at the end of Chapter 3, turn it back on.

Open a program

To practice using a program to create a document and save your work, you can use TeachText, a simple word-processing program that comes with your computer.

1. **If you closed the Macintosh HD window at the end of Chapter 3, open the Macintosh HD icon.**

   To open the icon, click it to select it and then choose Open from the File menu.

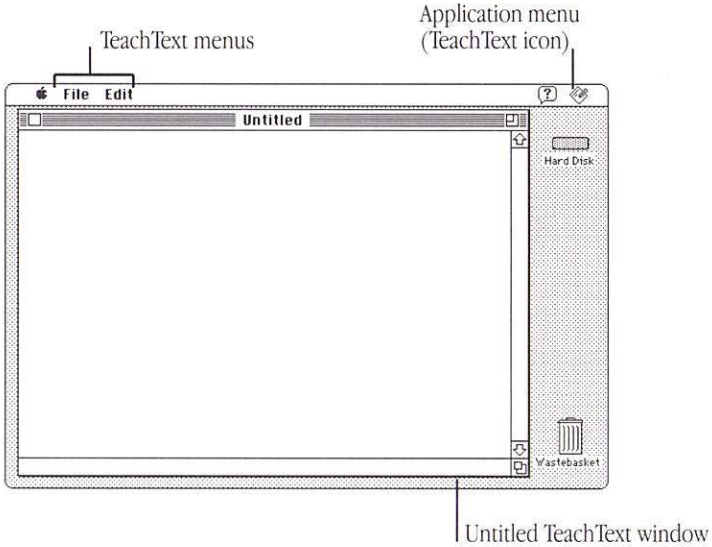
   The Macintosh HD window appears, showing you the contents of your startup disk. The contents include a program called TeachText.

2. **Open the TeachText icon.**

   To open the icon, click it to select it and then choose Open from the File menu.

When you open the TeachText program,

- an untitled window appears
- the menu bar shows TeachText menu names
- the Application menu icon in the right corner of the menu bar becomes the TeachText icon



The untitled window contains nothing because you haven't written anything in it. It remains untitled until you save whatever you've written and give it a name. The file that you create and name is called a *document*.

Create a document

The untitled window is like a blank sheet of paper, a document waiting to be created. In the upper-left corner of the empty document is a blinking vertical line. The line is called the *insertion point,* because it marks the place where the text you type will be inserted.

As you type, you use the Macintosh keyboard as you would a typewriter keyboard, except:

- If you make a mistake, press the Delete key to backspace over it.
- Don't press the Return key when you get to the end of a line. Keep typing. The text will continue on the next line automatically.

Type the following text:

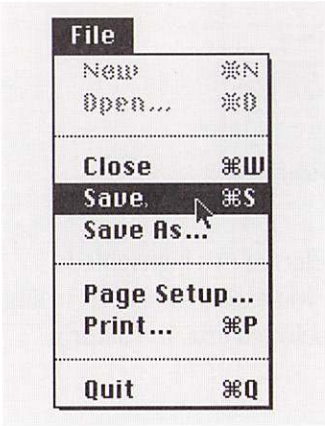
```
Sailing across an unknown sea, we saw the
lights of a city in the distant horizon. Was
it another strange land, with strange and
cruel people speaking different languages,
eating different food, wearing different
clothes? We wished it were home.
```

You will be changing this text in the next chapter.

Save your work

Until you save your work, it exists only in the computer's memory—like thoughts that are lost unless you write them down.

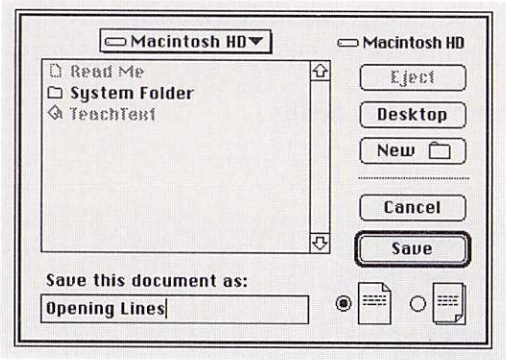
1. Choose Save from the File menu.



The dialog box that appears lets you name the document and decide where you want the computer to store it.

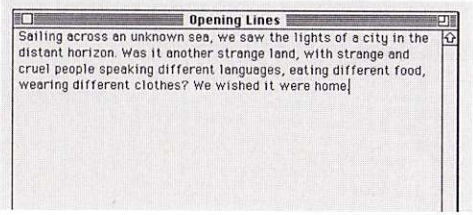
continues ▶

2. **Type "Opening Lines".**



Because the word "Untitled" is selected (it's highlighted) when the dialog box appears, all you have to do is start typing. Whatever you type replaces the selected text. You'll learn more about selecting text later.

3. **Click Save.**



The window is now titled "Opening Lines" and the document has been stored on Macintosh HD.

Save it or say so long

You need to save your document before you turn off the computer.

Using a Macintosh may seem like using a typewriter, pencil and ledger, paintbrush and canvas, or pen and drafting paper—but a computer is unlike those other tools in one important aspect: anything you create on a computer exists only temporarily in the computer's memory until you save your work.

That is, until you tell the computer to record your creation on a disk, your finest work is no better than a mental note—forgotten faster than you can turn off a switch.

Switch programs

The Opening Lines window is the active window and TeachText is the active program, but TeachText is not the only program that's open.

The Finder—the program that displays the Macintosh desktop—is also open, but right now it is not active. (The Finder is *always* open when your Macintosh is on.)

You can have several programs open at one time (how many programs depends on how much memory your computer has), but only one program at a time can be the active program. The active program is the one that's "on top" of other open programs—just as the active window is on top of other windows.

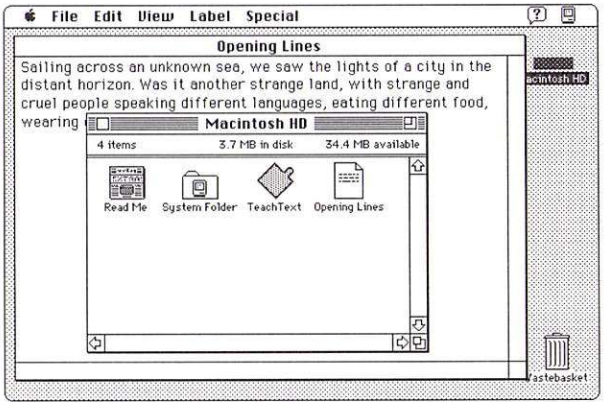
1. **Make the Opening Lines window smaller by dragging its size box and releasing the mouse button.**

   After you resize the window, you should be able to see the Macintosh HD icon in the upper-right corner of the Macintosh desktop.

2. **Make the Finder the active program by clicking the Macintosh HD icon or anywhere on the desktop.**

   The Finder becomes the active program. Notice that

   - the Macintosh HD window appears on top of the Opening Lines window
   - the menu bar shows Finder menu names
   - the Application menu icon in the right corner of the menu bar becomes the Finder icon



   Notice the icon in the Macintosh HD window representing the document Opening Lines, which you've just created and saved on Macintosh HD.

continues ▶

Two types of programs

Programs that you use to do your work on the computer are called application programs (or applications), because they're ways of *applying* computer technology to the work that you do.

Word-processing programs, for example, are applications because they enable you to write memos, reports, papers, theses, novels—whatever you need or want to write. And if your work involves creating graphics, calculating numbers, composing music, or keeping track of large amounts of data—there are application programs for your work as well.

Most Macintosh programs work in similar ways, so most of what you learn using one application you can use in other applications.

Programs that the computer uses to operate, on the other hand, are called system software (or "the operating system").

And then there's the Finder

Between you and system software is an application called the Finder, which is the program that displays the Macintosh desktop. It's called the Finder because, like the viewfinder in a camera, it gives you a view of all the objects—disks, programs, documents—that you have in your computing work space (your "desktop").

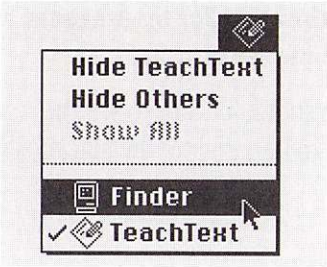
Using the Finder, you can tell system software what you want it to do for you: which disks you want to use, which programs and documents you want to open, where you want files to be stored.

3. **Make the Opening Lines window active by clicking anywhere in it. It's partially hidden by the Macintosh HD window.**

   The Opening Lines window comes back to the top. It's now the active window, and TeachText becomes the active program.

   You make a window active by clicking any part of it. The program that "owns" the window becomes active as soon as the window becomes active.

4. **Make the Finder the active program by choosing Finder from the Application menu in the right corner of the menu bar.**



   You choose Finder by pointing to the Application menu icon, pressing to pull down the menu, dragging to the item "Finder" so that it's highlighted, and then releasing the mouse button.

   The Finder becomes the active program, and the Macintosh HD window becomes the active window.

5. **Make TeachText the active program by choosing TeachText from the Application menu.**

TeachText becomes the active program, and the Opening Lines window becomes the active window.

From the Application menu, you can choose the open program that you want to make the active program. All open programs are listed in the Application menu. The icon at the top of the Application menu is the icon of the active program.

Close a document

When you close a document, you do *not* close the program that you used to create it. (Closing a program is called *quitting*.) The program remains open and remains the active program until you quit the program or make another program the active program.

1. **If the Opening Lines window is not the active window, click anywhere in it to make it the active window.**

2. **Close the Opening Lines window by clicking the close box near the left end of the title bar, or by choosing Close from the File menu.**

   The Opening Lines window closes but TeachText is still the active program. Notice that

   - the menu bar still shows TeachText menu names
   - the Application menu icon in the right corner of the menu bar is still the TeachText icon

What next?

Go to Chapter 5, where you'll learn how to revise your document and then print it.

Chapter 5

Changing a Document and Printing Your Work

In this chapter

You'll learn how to

- open a document
- change a document
- choose a printer
- print a document
- quit a program
- make a backup copy of a document

You'll also learn about

- double-clicking as a way to open icons
- using keyboard shortcuts

It will take about 40 minutes to go through this chapter.

Before you begin

You should have already

- gone through Chapters 1 through 4

Also, make sure that

- your computer is connected to a printer

A printer can be connected directly to your computer, or it can be connected through a network.

Go to the instructions that came with your printer if you need to connect it to your computer.

If your computer is connected to a network, find out from your network administrator (or the person who set up your computer)

- which printer on the network you can use
- where it is on the network (its "zone," if the network has zones)
- what its name is (every printer on a network has its own name)

If you turned off the Macintosh at the end of Chapter 4, turn it back on.

Open a document

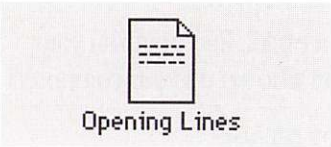
When you open a document, the program that you used to create that document becomes the active program.

1. **If you closed the Macintosh HD window at the end of Chapter 4, open the Macintosh HD icon.**

   To open the icon, click it to select it and then choose Open from the File menu.

   The Macintosh HD window appears, showing you the contents of your startup hard disk. The contents include the TeachText program and the TeachText document called Opening Lines, which you created in Chapter 4.

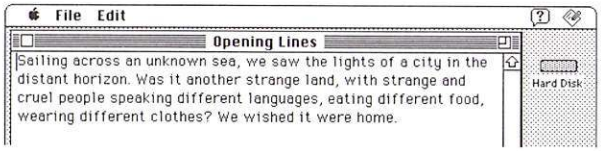
2. **Open the Opening Lines icon.**



   You can open an icon by *double-clicking* it: click the icon twice in rapid succession, without moving the pointer. Double-clicking an icon has the same effect as selecting the icon and then choosing the Open command.

   When you open Opening Lines, TeachText becomes the active program. (TeachText is the program that you used to create Opening Lines.) Notice that

   - the Opening Lines window appears
   - the menu bar shows TeachText menu names
   - the Application icon in the right corner of the menu bar becomes the TeachText icon

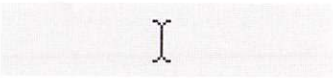


Change a document

The Opening Lines window shows you the text you typed in Chapter 4. You will be making some changes to the text using techniques that work in most Macintosh programs.

Keep two things in mind:

- The insertion point—the blinking vertical line—is where anything you type appears.
- The I-beam pointer replaces the arrow pointer when you're dealing with text. You control the I-beam pointer with the mouse as you would the arrow pointer.



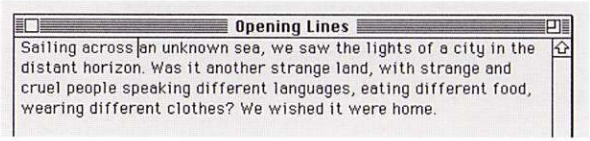
1. **Locate the insertion point. It should be in the upper-left corner of the document.**

2. **Locate the I-beam pointer. If you don't see it, move the mouse slightly. The pointer moves as the mouse moves.**

   Now you're ready to insert some text.

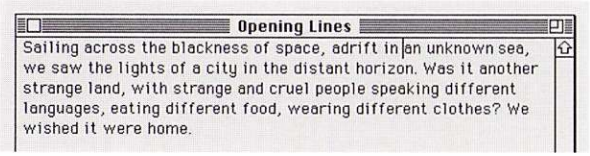
3. **Move the I-beam pointer to the immediate left of the word "an" (after "Sailing across").**

4. **Click. By clicking, you put the insertion point where you were pointing with the I-beam pointer. Anything you type is inserted at that point.**



5. **Type the words "the blackness of space, adrift in".**

   If you make any typing errors, press the Delete key to backspace over them.

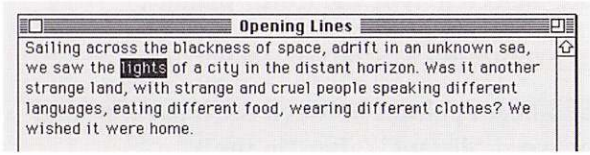


   Next, you'll change some text.

6. **Move the I-beam pointer to the immediate left of the word "lights" (after "we saw the").**

7. **Drag horizontally, selecting the word "lights", then release the mouse button.**

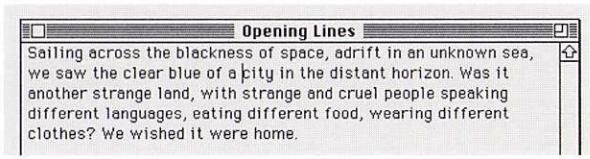
   To drag, hold the mouse button down as you move the mouse. The selected word is highlighted (surrounded by black or another color).



8. **With "lights" selected, type the words "clear blue".**

   Whatever you type replaces the text you selected. If you make any typing errors, press the Delete key to backspace over them.

9. **Now move the I-beam pointer to the immediate left of the word "city" (after "of a").**



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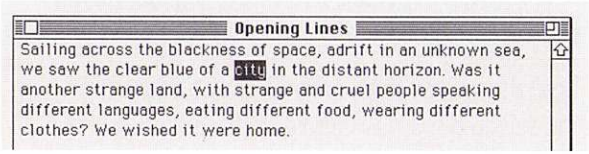
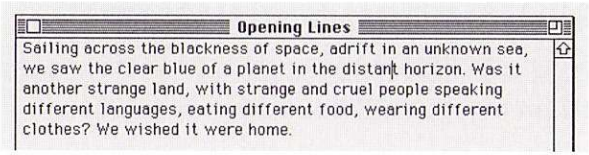
10. Drag horizontally, selecting the word "city", then release the mouse button.



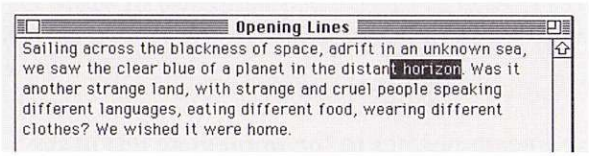
11. With "city" selected, type the word "planet".

Whatever you type replaces the text you selected.

12. Move the I-beam pointer between the letters "n" and "t" in the word "distant" (after "in the").

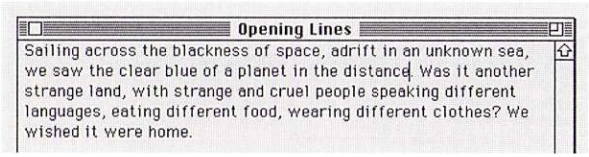


13. Drag horizontally, selecting the letter "t" and the word "horizon", then release the mouse button.



14. With "t horizon" selected, type the letters "ce".

If the period is missing after "distance", type one now.



If you make any typing errors, press the Delete key to backspace over them.

Save your work so far

The changes you've made so far are not part of Opening Lines until you save them; that is, you need to tell the computer to record the changes in the document that's stored on Macintosh HD (your startup hard disk).

Until you save them, the changes are in a very temporary, electronic state. You could lose them if power to the computer were interrupted or if a problem with a program caused the computer to stop working properly.

Choose Save from the File menu.

Or hold down the ⌘ (Command) key on the keyboard as you press the S key. Pressing ⌘-S is a *keyboard shortcut* for choosing Save from the File menu.

Save regularly, and save often.

Taking a shortcut

Many commands that you choose from menus can also be given using keyboard shortcuts. A keyboard shortcut is a combination of keys that you press at the same time to get the same result as choosing a command from a menu. One of the keys is always the ⌘ key or another modifier key.

For example, instead of choosing Save from the File menu, you could press the ⌘ key and the S key together.

You can find out the keyboard shortcuts for commands by pressing a menu name and looking at the commands in the menu. Any keyboard shortcuts are shown in a column next to the commands.

Make more changes to a document

You've saved the changes you've made so far: the changes are now part of the document that's stored on Macintosh HD. You'll be making a few more changes before you're done.

You continue by moving some text to another place in the paragraph.

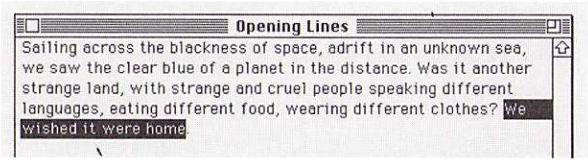
1. **Move the I-beam pointer to the immediate left of the words "We wished" (the start of the last sentence).**
2. **Click. By clicking, you put the insertion point where you were pointing with the I-beam pointer.**

continues ▶

3. **Move the I-beam pointer between the letter "e" in "home" and the period at the end of the last sentence.**

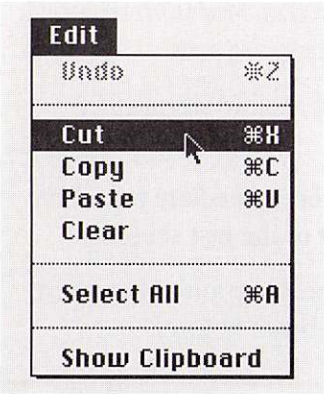
4. **Hold down the Shift key on your keyboard and click to select the words "We wished it were home".**

   Holding down the Shift key as you click selects the text between the insertion point and wherever you click.



5. **With "We wished it were home" selected, choose Cut from the Edit menu.**

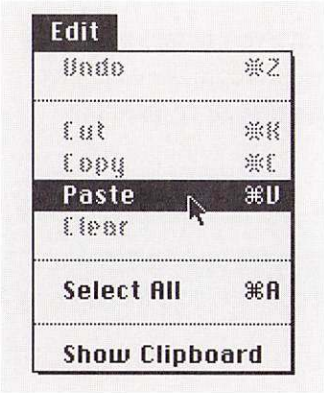
   Choosing Cut removes whatever you've selected from the document and stores the selected material in a temporary electronic space called the Clipboard.



6. **Move the I-beam pointer to the immediate left of the words "Was" (in "Was it another strange land").**

7. **Click to set the insertion point.**

8. **Choose Paste from the Edit menu.**

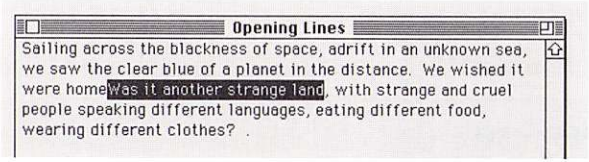


The words "We wished it were home" appear at the location of the insertion point. When you choose Paste, the Macintosh takes whatever's in the Clipboard and puts it in the document.

Next, you'll delete a sentence.

9. Drag the I-beam pointer across the words "Was it another strange land" to select them, then release the mouse button.

If the words are on two lines, drag down to the second line and release the mouse button when the pointer is to the immediate right of the word "land".

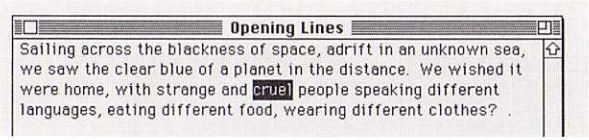


10. With "Was it another strange land" selected, choose Clear from the Edit menu.

When you choose Clear, the Macintosh removes the selected text from the document. (Pressing the Delete key once has the same effect.)

11. Select the word "cruel" (after "strange and") by double-clicking it.

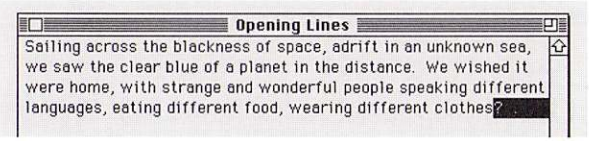
You can select a word by double-clicking it: point to it with the I-beam pointer and click twice in rapid succession, without moving the pointer.



12. With "cruel" selected, type "wonderful".

Whatever you type replaces the text you selected.

13. Drag the I-beam pointer across the question mark (after "different clothes") and the stray period at the end of the paragraph, then release the mouse button.



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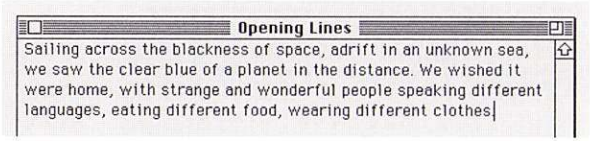
14. With the question mark and the period selected, type a period.

You may have left extra spaces or no spaces between words. If you did, position the I-beam pointer where you need to delete or add a space, click to set the insertion point, and press the Delete key or the Space bar as necessary.



15. Choose Save from the File menu (or use the keyboard shortcut ⌘-S).

Choose a printer

Before you can print a document, you have to tell the Macintosh which printer to use by choosing a printer in a program called the Chooser.

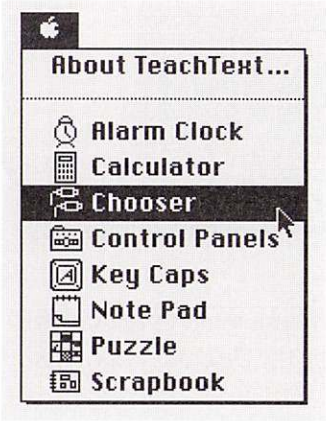
You don't need to choose a printer every time you print. You need to choose one only when you want to use a printer for the first time and whenever you decide to change printers.

How you use the Chooser depends on whether your Macintosh is connected directly to the printer or connected to a network.

If your printer is not on a network

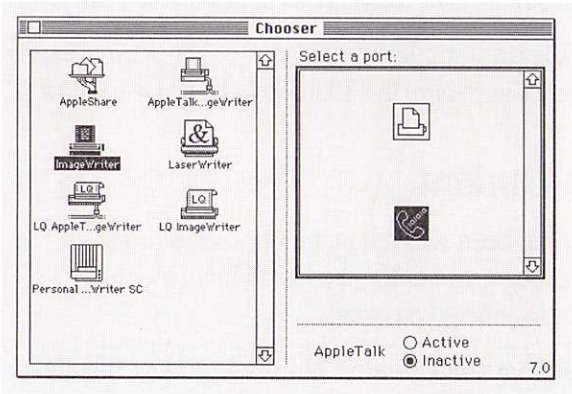
Make sure that you've connected the printer according to the instructions that came with it and that you know which port you used (on the back of the computer) to connect the printer.

1. Choose the Chooser from the Apple menu.



The Chooser window appears.

2. **Click the icon representing the printer you want to use. Make sure the icon is selected.**



❖ *If you have a Personal LaserWriter SC,* go to step 5 after you click the Personal LaserWriter SC icon. ❖

3. **Click to select the icon representing the port that you used to connect the printer.**

   You have two choices: the printer port or the modem port. The printer port is automatically selected. Click the icon that matches the icon of the port (on the back of the computer) to which you connected the printer cable.

4. **Click the word "Inactive" next to the word "AppleTalk".**

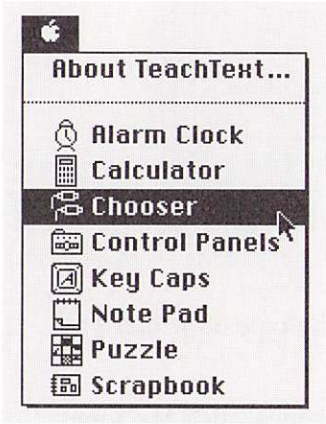
5. **Close the Chooser by clicking the close box near the upper-left corner of the Chooser window.**

   The Opening Lines window should now be the active window. (If it isn't, click anywhere in it to make it the active window.)

If your printer is on a network

Find out from your network administrator (or the person who set up your computer) which printer you can use, which zone it's in (if your network has zones), and what its name is (every printer on a network has its own name).

1. **Choose the Chooser from the Apple menu.**

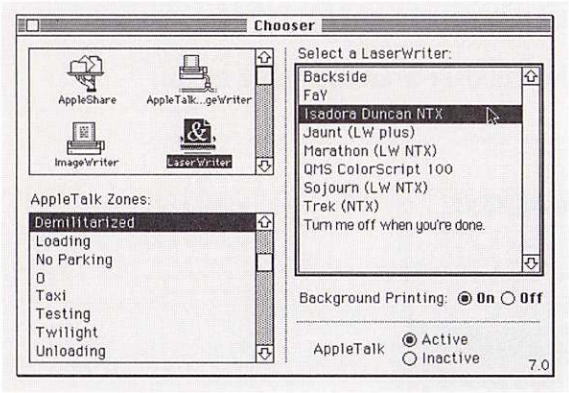


The Chooser window appears.

continues ▶

2. **Click the word "Active" next to the word "AppleTalk".**

   If Active wasn't already selected, a dialog box appears. Click OK.



3. **Click the icon representing the type of printer you want to use.**

4. **If you see a list of AppleTalk zones, click the zone where the printer is located.**

   You may have to click the up and down scroll arrows to find the zone. The zones are listed alphabetically.

5. **Click the name of the printer you want to use, even if it's the only one that appears.**

6. **Click the close box near the upper-left corner of the Chooser window.**

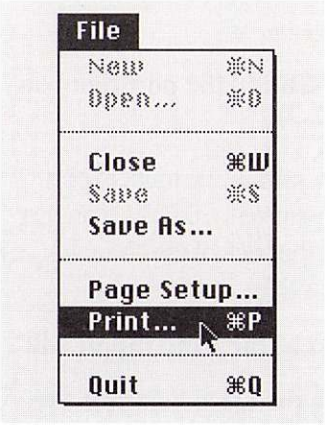
   If you changed printers, a dialog box appears. Click OK.

   The Opening Lines window should now be the active window. (If it isn't, click anywhere in it to make it the active window.)

Print a document

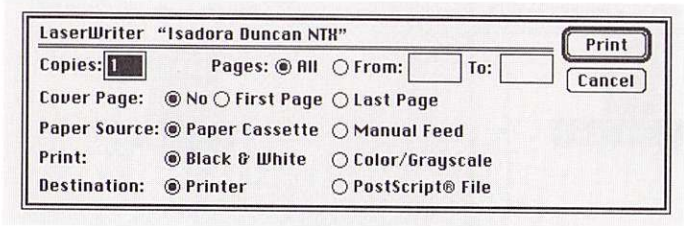
Once a printer has been selected in the Chooser, printing becomes a two-step process. To practice printing, use the Opening Lines document you created.

1. **Make sure that the Opening Lines window is the active window, then choose Print from the File menu.**



   If the Opening Lines window is not the active window, click anywhere in it to make it the active window.

The dialog box that appears when you choose Print offers you many options, depending on the program and the printer you're using. You can learn more about these options from the instructions that come with your programs and from *Macintosh Reference,* Part II of this book.



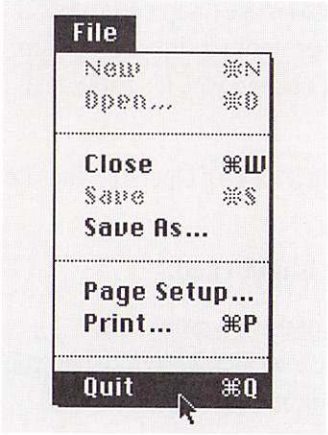
2. **Click the button labeled Print.**

   The printer you chose prints your Opening Lines document.

Quit a program

Quitting a program closes the program as well as any documents you may have open that were created using that program. Quitting a program is not the same as closing a document (which you did at the end of Chapter 4). Closing a document leaves the program open and active.

- **Make sure that the Opening Lines window is the active window, then choose Quit from the File menu.**



Or press the ⌘ key and the Q key together.

❖ *If a dialog box asks whether you want to save any changes,* click Save. ❖

The Opening Lines document and the TeachText program are closed, and the Finder, the program that displays the Macintosh desktop, becomes the active program.

Make a backup copy

Storing a copy of your work on another disk is wise practice, like saving regularly and saving often. In case a file or an entire disk is damaged, you have a copy of the file on another disk as a backup. (It seldom happens, but if it happens once to you, it's happened once too often.)

To practice making a backup copy, put a copy of Opening Lines on your practice disk.

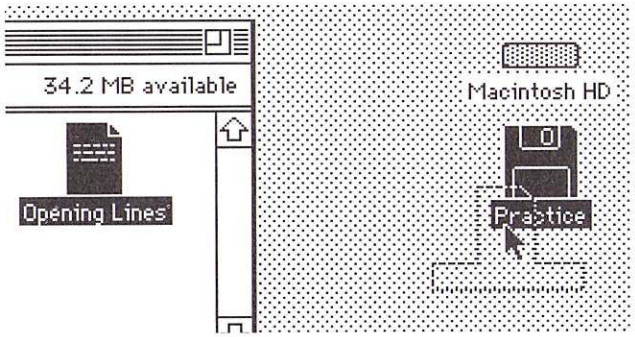
1. **Make sure your practice disk is unlocked.**

   A moveable tab on the back side of the case should be blocking the square hole near the lower-left corner (when you hold the disk as if to insert it), indicating that the disk is unlocked.

2. **Insert the practice disk in your computer's floppy disk drive.**

   The Practice disk icon appears on the desktop, directly below the Macintosh HD icon.

3. **Drag the Opening Lines icon to the Practice disk icon until both icons are highlighted, then release the mouse button.**



Both icons are highlighted when the tip of the pointer arrow reaches the Practice disk icon.

When you release the mouse button, the Macintosh copies the contents of the Opening Lines icon to the Practice disk.

You copy an icon when you drag it to a *different* disk. When you drag it elsewhere on the same disk, you are merely moving the icon.

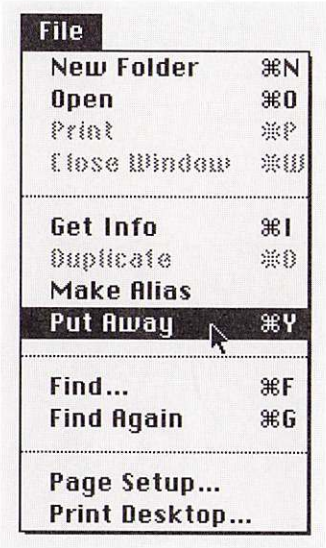
4. **Open the Practice disk icon.**

   You open the Practice disk icon by clicking the icon to select it and then choosing Open from the File menu, or you can double-click the icon.

   The Practice disk window appears, showing that a backup copy of the file, also called Opening Lines, is stored on the floppy disk.

5. **Eject the Practice disk from the disk drive.**

   You eject the disk by clicking the Practice disk icon to select it and then choosing Put Away from the File menu.



What next?

Go to Chapter 6, where you'll learn how to organize your work. Or take a break. Remember to turn off your Macintosh if you'll be away for more than a few hours.

Chapter 6

Organizing Your Work

In this chapter

You'll learn how to

- make a copy of a document
- change the name of an icon
- save another version of a document under a different name
- open a document while its program is the active program
- organize icons in a folder
- use an alias for a document or program
- create stationery
- throw away files you no longer want or need

You'll also learn about

- the difference between Save and Save As
- what an alias is

It will take about an hour to go through this chapter.

Before you begin

You do not need to go through this chapter before you start learning how to use your Macintosh programs.

You should have already

- gone through Chapters 1 through 5

If your Macintosh is off, turn it back on.

Make a copy of a document

In the course of your work, you'll often want to make a copy of a document so you can preserve the original while making changes to the copy. To practice making a copy of a document, first create a new document, as you did in Chapter 5.

1. **If you closed the Macintosh HD window, open the Macintosh HD icon.**

   To open the icon, click it to select it and then choose Open from the File menu. Or double-click the icon.

   The Macintosh HD window appears, showing you the contents of your startup hard disk.

2. **Open the TeachText icon.**

   To open the icon, click it to select it and then choose Open from the File menu. Or double-click the icon.

   When you open the TeachText program,

   - an untitled window appears
   - the menu bar shows TeachText menu names
   - the Application menu icon in the right corner of the menu bar becomes the TeachText icon

   The untitled window contains nothing because you haven't written anything in it. It stays untitled until the first time you save your work (name the document and store it on a disk).

3. **Type the following text:**

   ```
   Dear Mom and Dad,

   This letter is overdue, I know, but until
   I sat down to write, I had no idea how
   long overdue it is. Time sure flies when
   you don't have enough of it.

   Julie and I are doing well. The dog is
   getting better all the time. How are you
   all?
   ```

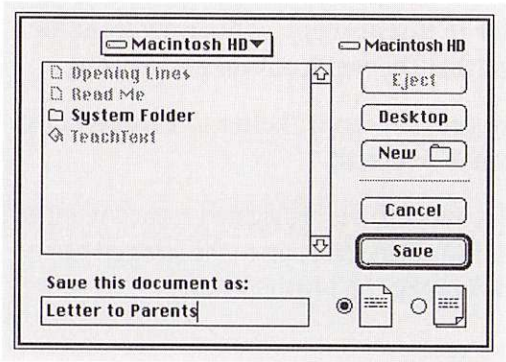
Remember:

- If you make a mistake, press the Delete key to backspace over it.
- Don't press the Return key when you get to the end of a line. Keep typing. The text will continue on the next line automatically.
- Press the Return key only when you want to start a new paragraph.
- The insertion point—the blinking vertical line—is where the text you type will appear.
- The I-beam pointer replaces the arrow pointer when you're dealing with text. You control the I-beam pointer with the mouse as you would the arrow pointer.

4. **Choose Save from the File menu.**

   The dialog box that appears lets you name the document and decide where you want the computer to store it.

5. **Type "Letter to Parents".**



   Usually you need to select text or set the insertion point before you type text. In this case, because "Untitled" is selected when the dialog box appears, all you have to do is start typing. Whatever you type replaces the selected text.

6. **Click Save.**

   The window is now titled "Letter to Parents" and the document has been stored on Macintosh HD (your startup hard disk).

7. **Close the Letter to Parents window.**

   To close the window, click the close box near the left end of the title bar, or choose Close from the File menu.

   The window closes, and TeachText remains the active program.

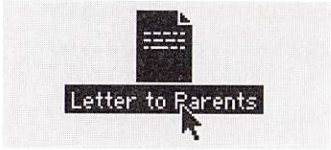
8. **Click the Macintosh HD icon, the Macintosh HD window, or anywhere on the desktop.**

   The Finder becomes the active program. Among the contents of the Macintosh HD window is the Letter to Parents icon, representing the document you created and saved.

9. **Locate the Letter to Parents icon in the Macintosh HD window.**

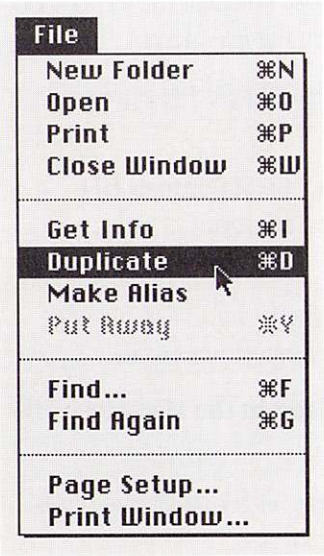
   You may have to make the window bigger or use the scroll arrows to find it.

10. **Click the Letter to Parents icon to select it.**

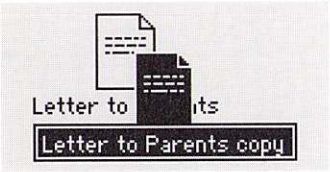


continues ▶

11. Choose Duplicate from the File menu.



Another icon, labeled "Letter to Parents copy", appears in the Macintosh HD window. Notice that the icon (as well as its name) is selected and that the Letter to Parents icon is no longer selected.



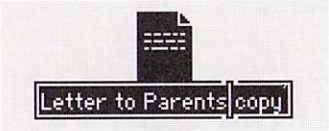
Change the name of an icon

You can change the name of any icon to anything you like, using spaces, capital and lowercase letters, numbers, and any other characters except a colon (:). If you open the icon, you'll see that the name of its window has also changed.

1. **Drag the "Letter to Parents copy" icon away from the original icon so that the two icons do not overlap.**

2. **Click the *name* (not the icon) "Letter to Parents copy" (even if the icon is selected).**

   When the name is selected, it is highlighted and a box appears around it. Notice that when you point to the selected name, the arrow pointer becomes an I-beam pointer.



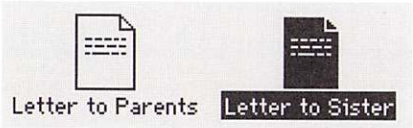
3. **With the name selected, type "Letter to Sister".**

   Or drag the I-beam pointer over the words "Parents copy" to select them, and then type "Sister" to replace them.

   Another way to select a word is to double-click it: click anywhere inside the word twice in rapid succession, without moving the pointer.

   Whatever you type replaces the selected text.

4. **Press the Return key.**



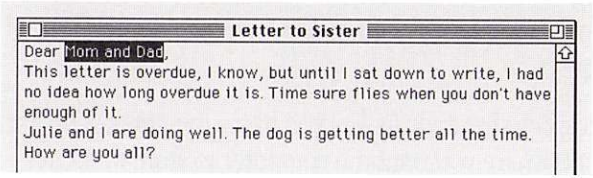
Now you have two documents. One is a copy of the other but they have different names. You can revise one without changing the other.

5. **Open the Letter to Sister icon.**

To open the icon, click it to select it and then choose Open from the File menu. Or double-click the icon.

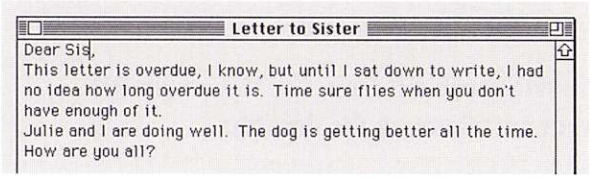
TeachText becomes the active program.

6. **Drag the I-beam pointer over the words "Mom and Dad" to select them.**



7. **Type "Sis".**

Whatever you type replaces the selected text.



8. **Choose Save from the File menu.**

9. **Choose Close from the File menu.**

Or click the close box near the upper-left corner of the Letter to Sister window. You now have two slightly different versions of your letter: one for your parents, and the other for your sister.

TeachText remains the active program.

Save another version of a document

There is another way to make a different version of a document. You can stay in the program you're using to create the document and save a different version under a different name.

1. **Click the Macintosh HD icon, the Macintosh HD window, or anywhere on the desktop.**

   The Finder becomes the active program.

2. **Open the Letter to Parents icon.**

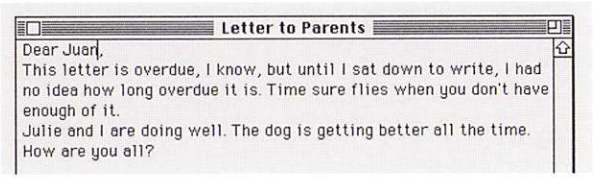
   To open the icon, click it to select it and then choose Open from the File menu. Or double-click the icon.

   TeachText becomes the active program.

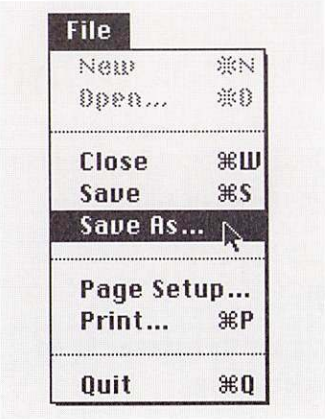
3. **Drag the I-beam pointer over the words "Mom and Dad" to select them.**

4. **Type "Juan".**

   Whatever you type replaces the selected text.



5. **Choose Save As from the File menu. Do not choose Save.**

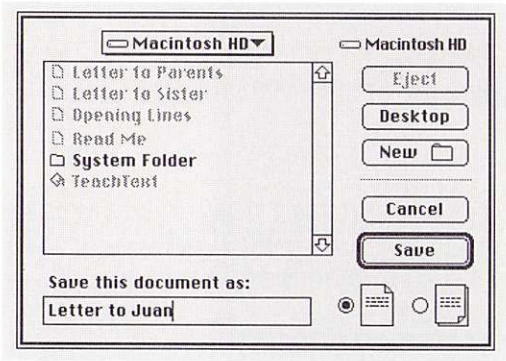


Choosing Save would change the original letter (so that the letter to your parents would read "Dear Juan").

Choosing Save As, in contrast, lets you create a new document based on the original document, but including the changes you made.

The dialog box that appears lets you name the new document and decide where you want the computer to store it. "Letter to Parents," the name of the original document, is already selected and ready to be changed.

6. **Type "Letter to Juan".**



Whatever you type replaces the selected text.

7. **Click Save.**

The new document, "Letter to Juan," now appears in the active window, replacing the original document, "Letter to Parents." Notice that the window's title bar now says, "Letter to Juan".

The original document is set aside, unchanged (if you open it, you'll find that the first line is still "Dear Mom and Dad").

Save?—or Save As?

Choosing Save stores the changes you've made to the active document (the document in the active window) since you opened it or since the last time you chose Save.

Choosing Save As, on the other hand, creates a new document that includes the changes you've made. Save As sets aside the original document *without* storing the changes (in other words, the original document remains unchanged from when you opened it or last chose Save).

After you give the new document a name, it replaces the original document in the active window. The title bar of the active window shows the name of the new document.

Open a document while its program is the active program

You can open a document without making the Finder the active program and then opening its icon on the Macintosh desktop. You can open a document while the program that you used to create it remains the active program.

1. **Close the document "Letter to Juan."**

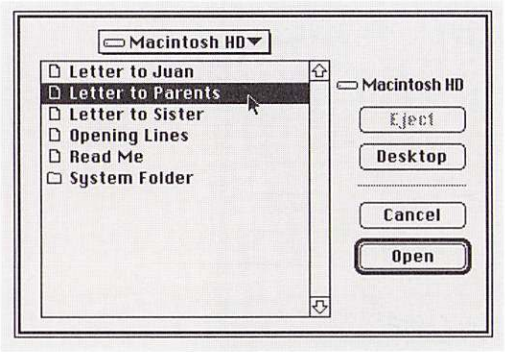
   Click the close box near the upper-left corner of the document window or choose Close from the File menu.

   TeachText remains the active program.

2. **Choose Open from the File menu.**

   The dialog box that appears lets you find the document you want to open.

3. **Click "Letter to Parents."**



4. **Click the Open button.**

   The "Letter to Parents" document window appears.

Organize icons in a folder

Sooner or later, in the course of your work, you'll have too many documents and programs to keep track of easily. The Macintosh offers numerous tools and techniques (all of them explained in *Macintosh Reference,* Part II of this book) to help you organize your work. Creating a folder and putting files in it is the simplest way.

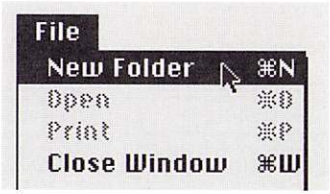
1. **If "Letter to Parents" is open and TeachText is the active program, choose Quit from the File menu.**

   The Finder becomes the active program.

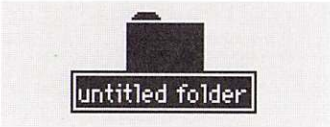
2. **If the Macintosh HD icon is not open, open it.**

   The Macintosh HD window should be the active window.

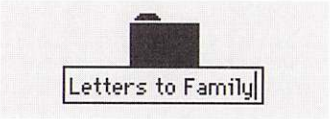
3. **Choose New Folder from the File menu.**



   An icon named "untitled folder" appears in the Macintosh HD window. The icon, including its name, is already selected. (The name is highlighted and has a box around it.)

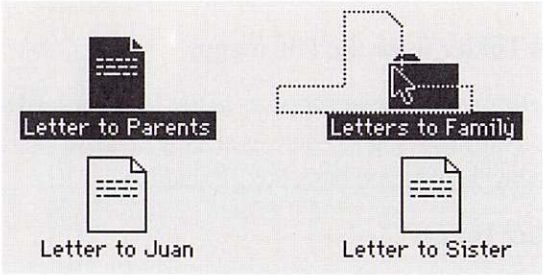


4. **Type "Letters to Family".**

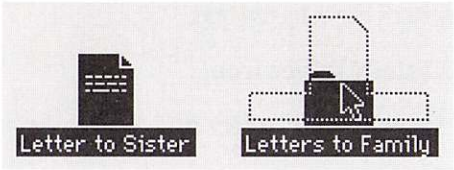


   Whatever you type replaces the selected text. If nothing happens when you type, click the name so that a box appears around it and then try again.

5. **Drag the Letter to Parents icon to the new folder icon until both icons are highlighted, then release the mouse button.**



6. **Drag the Letter to Sister icon to the Letters to Family folder icon until both icons are highlighted, then release the mouse button.**



   The Letters to Family folder now contains Letter to Parents and Letter to Sister. You can open the Letters to Family folder icon if you want to make sure that they are there.

Use an alias

As you work, you may find it handy to have the same program or document stored in more than one folder, so you can open it quickly when you're in a particular folder.

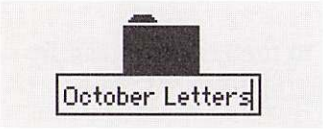
1. **If the Macintosh HD icon is not open, open it.**

   The Macintosh HD window should be the active window.

2. **Choose New Folder from the File menu.**

   An icon named "untitled folder" appears in the Macintosh HD window. The icon, including its name, is already selected. (The name is highlighted and has a box around it.)

3. **Type "October Letters".**

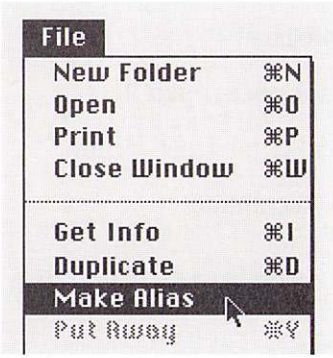


   Whatever you type replaces the selected text.

4. **Open the Letters to Family folder icon.**

5. **Click the Letter to Sister icon to select it.**

6. **Choose Make Alias from the File menu.**

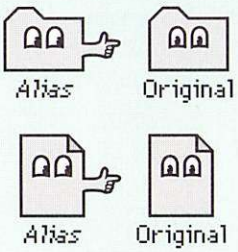


   An icon named "Letter to Sister alias" appears on top of the Letter to Sister icon. The icon and its name are already selected.

   Note that the name of the alias appears in italics. The name of an alias appears in italics so you have a way to tell which icons are aliases.

What's an alias?

An alias is a way to represent a program or document in any folder without having to make a copy of the file. An alias merely "points" to the original file that it represents, so when you open an alias, you're actually opening the original file. Any changes you make and save are stored with the original file, so you see them when you open any of the aliases for the original file (you can make as many aliases for a program or document as you need).

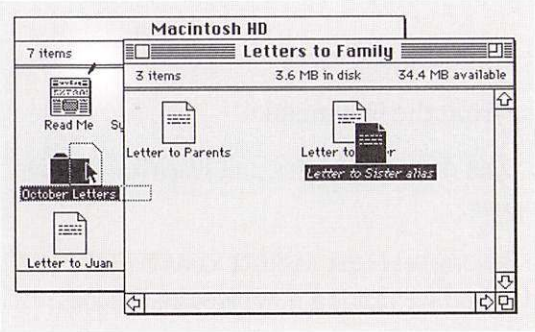


You could make copies of a program or document and put them in separate folders, but the copies would take up much more room on your disk than a single copy. And if you want the copies to be always exactly alike, you'd have to make the same changes to each copy if you make any changes to one copy.

Using aliases instead of making copies of a program or document lets you save space on your disks.

7. **Drag the Letters to Family window to the right. You should be able to see the October Letters folder in the Macintosh HD window behind it.**

8. **Drag the Letter to Sister alias to the October Letters folder in the Macintosh HD window, then release the mouse button.**



You may have to change the size and position of the Letters to Family window so you can see both icons.

9. **Open the October Letters folder icon.**

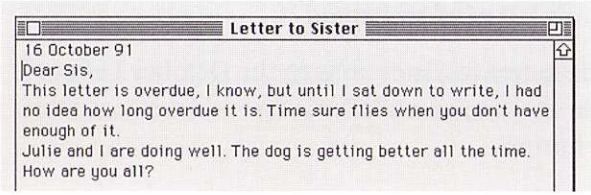
10. **Open the Letter to Sister alias icon.**

The document Letter to Sister opens, and TeachText becomes the active program.

The insertion point (the blinking vertical line) should be at the beginning of the document, to the left of *D* in "Dear".

continues ▶

11. Type "16 October 91" and press the Return key once.



12. Choose Save from the File menu.

13. Choose Close from the File menu.

The Letter to Sister document closes, and TeachText remains the active program.

You can open the original Letter to Sister icon (in the Letters to Family folder) and see that it is now dated 16 October 91.

Letter to Sister is now available in both the Letters to Family folder and the October Letters folder. By keeping the original in one folder and an alias in the other folder, you have access to the same letter from either folder.

14. Close all the windows on the desktop.

Create stationery

In your work, you may find it convenient to have a document that serves as the computer equivalent of stationery, like a memo pad or "While You Were Out" form. Each time you need a sheet, you take one from your endless supply of stationery and fill it in.

To practice creating stationery, create a document in TeachText that works like a memo pad.

1. With TeachText the active program and no TeachText window open, choose New from the File menu.

If TeachText is not the active program, open the TeachText icon in the Macintosh HD window, or choose TeachText from the Application menu.

An untitled TeachText window appears.

2. **Type the following text:**

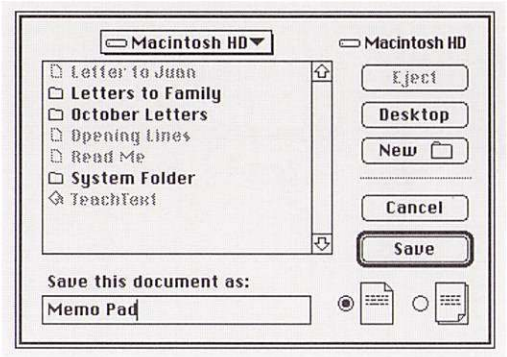
```
DATE:

TO:

FROM: [Type your name here.]

RE:
```

3. **Choose Save from the File menu.**

   The dialog box that appears lets you name the document and decide where you want the computer to store it.

❖ *If Macintosh HD does not appear above the list,* click Macintosh HD above the Eject button. ❖

4. **Type "Memo Pad".**



Because "Untitled" is selected when the dialog box appears, all you have to do is start typing. Whatever you type replaces the selected text.

5. **Click Save.**

   The window is now titled "Memo Pad" and the document has been stored on Macintosh HD.

6. **Close the Memo Pad document.**

   To close the window, click the close box near the left end of the title bar, or choose Close from the File menu.

   The window closes, and TeachText remains the active program.

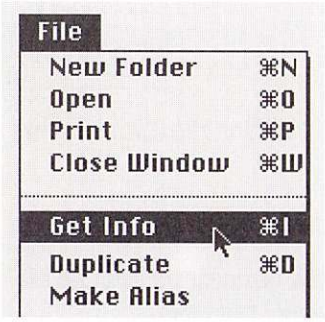
7. **Click the Macintosh HD icon, the Macintosh HD window, or anywhere on the desktop.**

   The Finder becomes the active program, and the Macintosh HD window becomes the active window. Among its contents is the Memo Pad document icon.

8. **Click the Memo Pad icon to select it.**

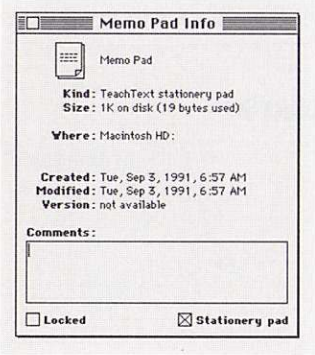
continues ▶

9. **Choose Get Info from the File menu.**



The Info window that appears contains information on the selected icon.

10. **Click "Stationery pad" near the lower-right corner so that an X appears in the checkbox.**



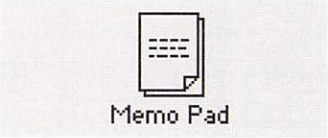
Clicking "Stationery pad" converts Memo Pad from an ordinary document to a stationery pad. When you open a stationery pad, an untitled window appears showing a blank "form" from that stationery, or a dialog box appears asking you to name the new document.

You cannot change the stationery pad itself unless you turn it back into a regular document. You do this by opening the stationery pad's Info window and clicking "Stationery pad" again to remove the X.

11. **Close the Info window.**

To close the window, click the close box near the left end of the title bar, or choose Close Window from the File menu.

Note that the Memo Pad icon has changed from an ordinary document icon to a stationery pad icon.



On your own: Fill out some stationery

Open the Memo Pad stationery pad icon and type a short memo.

Remember to click the I-beam pointer where you want your text to appear before you start typing. Clicking in this way sets the insertion point (the vertical blinking line).

Choose Save from the File menu, name your memo, click the Save button, and choose Quit from the File menu.

Note that the Memo Pad stationery icon remains in the Macintosh HD window. The icon for the memo you created (an ordinary document icon) should also be in the window.

What next?

Go to Chapter 7, where you'll learn how to find out more about your Macintosh. Or take a break.

Remember to turn off your Macintosh if you'll be away for more than a few hours.

Chapter 7

Learning More About Your Macintosh

In this chapter

You'll learn how to

- use the Balloon Help system
- use *Macintosh Reference,* Part II of this book

You'll also learn about

- the contents of *Macintosh Reference*

It will take about 20 minutes to go through this chapter.

At the end of this chapter, you'll be ready to start learning the programs that you intend to use on the Macintosh.

Before you begin

You should have already

- gone through Chapters 1 through 6

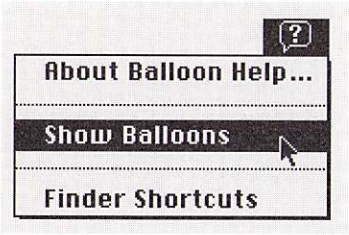
If you turned off the Macintosh at the end of Chapter 6, turn it back on.

Use Balloon Help

Balloon Help explains the function or significance of icons, menus, commands, and other features on the Macintosh screen, using balloons similar to those you see in comic strips. The balloon points to the object it explains.

Many Macintosh programs have Balloon Help.

1. **Point to the Help icon near the right end of the menu bar.**
2. **Press to pull down the Help menu.**
3. **Drag to the Show Balloons command (the second item in the Help menu) so that it is highlighted, then release the mouse button.**



After you choose Show Balloons, balloons containing explanatory text appear next to objects that you point to on screen.

4. **To show a balloon describing the Wastebasket, point to the Wastebasket icon.**

   Except for the fact that balloons appear next to objects that you point to, the way you work is the same: you can select icons, choose commands, and so on.

5. **Point to the Macintosh HD icon (your startup hard disk).**

   A balloon appears next to the icon.

6. **Click the Macintosh HD icon to select it.**

   You can select the icon even with the balloon showing.

7. **Point to the File menu.**

   A balloon appears next to the menu name.

8. **Press to pull down the File menu.**

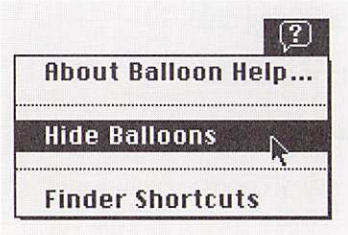
   The balloon disappears when you pull down the menu.

9. **Slowly drag to the Open command so that it is highlighted, then release the mouse button.**

   Notice that a balloon appears next to a command if you pause briefly as you drag past it.

   The Macintosh HD window becomes the active window. To see more balloons, you can point to different parts of the window and to different icons in the window.

10. Choose Hide Balloons from the Help menu.



To choose Hide Balloons, point to the Help icon in the menu bar, press to pull down the Help menu, drag to the Hide Balloons command so that the command is highlighted, and release the mouse button.

Hide Balloons and Show Balloons replace each other in the Help menu (after you choose one, the other appears in its place).

Use *Macintosh Reference*

Macintosh Reference, Part II of this book, contains all the information you need to use your computer effectively and efficiently. Unlike Part I, which is meant to be read from beginning to end, Part II is meant to be used like a dictionary: you turn to it when you need to look up some information, and then you read only that information.

To help you find the information, this book has a table of contents, an index, a glossary, and a summary after Chapter 16 (on the green pages). To practice using the reference, look up a few topics that you'll probably need to know about in the near future.

1. **Find "Cleaning the mouse" under Chapter 15 in the table of contents.**
2. **Go to the page that you're referred to and read about how to clean the mouse.**
3. **Use the index to find information on erasing floppy disks.**

   Erasing a disk is the same as initializing. Initializing a new disk is explained in Chapter 3 of this book.

   Several index entries refer you to the information you need.

   - You could look under "disks" and find "erasing."
   - You could look under "erasing" and find "disks."
   - You could look under "floppy disks" and find "erasing."

What's in Macintosh Reference

Part II of this book, *Macintosh Reference,* has almost no information on using application programs. Your best source of information about a particular program is the set of books and disks that came with that program.

Macintosh Reference has detailed information on

- setting up your system software
- using hard disks and floppy disks
- organizing your files
- adapting your Macintosh to your own use
- printing
- using your Macintosh on a network
- expanding your computer system
- care and maintenance
- tips and troubleshooting

The setup book that came with your computer has information on the features specific to your particular model.

4. **Go to the pages that you're referred to and read about erasing disks.**

   Some of the pages are about initializing disks.

5. **Find "Glossary" in the table of contents.**

6. **Look up "keyboard shortcuts" in the glossary.**

   Using keyboard shortcuts as a way of choosing commands is explained in Chapter 5.

What next?

Congratulations. You've gone through the *Macintosh Basics* tour and you're done with *Learning Macintosh,* Part I of this book. You've been introduced to and practiced everything you need to know to start using the Macintosh in a productive way.

There is more to learn before you're using your computer in the most effective and most efficient ways—but you'll be learning those ways as you use your programs and gain more experience with the Macintosh.

At this point, you could

- start learning how to use your Macintosh programs
- go to Chapter 11 to learn about ways to adapt your Macintosh to your specific needs or preferences
- go to Chapter 13 to learn about using your Macintosh on a network with printers and other computers
- take a break

To help you find information in this book, use the table of contents; the index; the glossary; or the summary, "Working on the Macintosh Desktop," on the green pages after Chapter 16.

Part II

Part II

Macintosh Reference

Chapter 8 Setting Up Your Macintosh System

Chapter 9 Hard Disks and Floppy Disks

Chapter 10 Organizing Your Files

Chapter 11 Adapting Your Macintosh to Your Own Use

Chapter 12 Printing

Chapter 13 Using Your Macintosh on a Network

Chapter 14 Expanding Your Macintosh System

Chapter 15 Care and Maintenance

Chapter 16 Tips and Troubleshooting

Summary Working on the Macintosh Desktop

How to use Part II

Use this part of the book as you would a dictionary or encyclopedia: Turn to it when you need specific information, and then read only those parts that give you that information—so you can go on with your work.

Macintosh Reference contains little or no information on how to use your application programs. If you need information on a particular program, go to the books and disks that came with that program.

If you're new to computers or new to the Macintosh, go through the *Macintosh Basics* tour and Part I of this book, *Learning Macintosh,* to learn basic Macintosh skills before you use *Macintosh Reference*.

To help you find information in this book, use the index and the table of contents. Also, use the summary, "Working on the Macintosh Desktop," on the green pages after Chapter 16 and the glossary at the back of the book if you're looking for short definitions or brief summaries of concepts and procedures.

If you need information on setting up your Macintosh or any information on features specific to your particular model, go to the setup book that came with your computer.

Use this book in combination with the setup book, the books and disks that came with your application programs, and Balloon Help to find the information you need.

Chapter 8

Setting Up Your Macintosh System

In this chapter

- Setting up your computer hardware
  - Arranging your office
  - Avoiding fatigue
  - Adjusting your keyboard
- Setting up your system software
  - Installing, reinstalling, or updating system software
  - Starting up with a floppy disk
- Setting up your programs
  - Installing a program
  - Working with several programs at a time

Setting up your computer hardware

For information on assembling the hardware components of your computer system, go to the setup book that came with your Macintosh.

If you're connecting your Macintosh to a printer, a modem, an external floppy disk drive, an external hard disk drive, or other external devices, go to the instructions that came with the device, or see Chapter 14, "Expanding Your Macintosh System."

If you're connecting your computer to another Macintosh or to a printer on a network, see Chapter 13, "Using Your Macintosh on a Network."

Arranging your office

Here are some guidelines for adjusting the furniture in your office to accommodate your physical size and shape.

- Adjust the chair so your thighs are horizontal, your feet flat on the floor, and the backs of your knees slightly higher than the seat of your chair. (If your chair is too high for your feet to rest on the floor, use a footrest.)
- Use a chair that supports your lower back.
- When you use the computer keyboard, your shoulders should be relaxed. Your upper arm and forearm should form a right angle, with your wrist and hand in roughly a straight line.
- Arrange the monitor so the top of the screen is at or slightly below eye level when you're sitting at the keyboard.
- Position the monitor to minimize glare and reflections on the screen from overhead lights and windows.
- Clean your screen regularly.

A variety of accessories, including document holders, keyboard trays, and monitor stands, may enhance your comfort while using the computer.

Avoiding fatigue

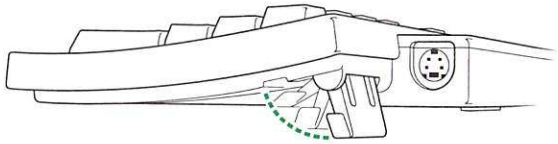
These tips should help you get the most out of your work sessions with the computer.

- Regularly change your seated position, stand up, or stretch whenever you start to feel tired. Research indicates that frequent "micro-breaks" are helpful in reducing fatigue and discomfort.
- Use a soft touch on the keyboard and keep your hands and fingers relaxed. Some computer users may develop discomfort in their hands, wrists, or arms if they do intensive work without breaks. If you begin to develop chronic pain and discomfort in your hands, wrists, or arms, consult your physician.
- Keep two fingers (the index and middle fingers) resting lightly on the mouse button when you use the mouse.
- Occasionally rest your eyes. From time to time focus your eyes on a distant object. Blink often while you work.

Adjusting your keyboard

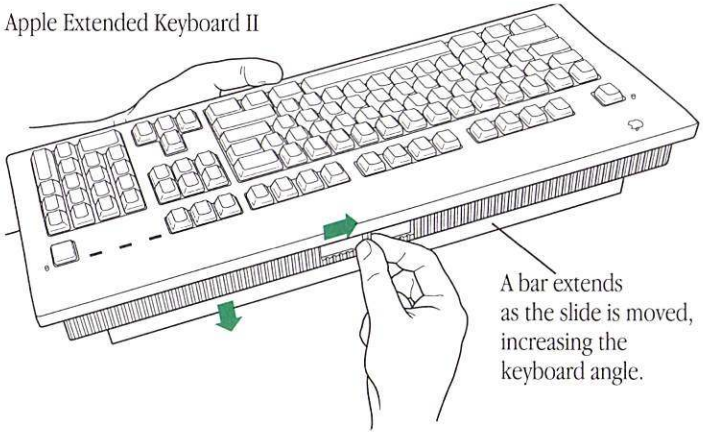
If you bought the Apple Extended Keyboard II with your Macintosh, or if your Macintosh Classic or Macintosh LC came with its standard keyboard, you can adjust the angle of the keyboard so that your hands and wrists are relaxed and you're comfortable as you type.

The Macintosh Classic or Macintosh LC standard keyboard has tabs on either side that swing out under the keyboard, changing the angle of the keyboard on your desk.



The Apple Extended Keyboard II has a sliding tab in the back that controls how much a bar extends under the keyboard, changing the angle of the keyboard on your desk.

Apple Extended Keyboard II



Setting up your system software

Your Macintosh cannot operate without system software—the programs and other files that the Macintosh needs to start itself up and to run the application programs you use. When you turn on your Macintosh, it looks for a disk that contains the system software (in a folder called the System Folder). Any disk that contains the system software is a *startup disk.*

Almost always, the startup disk is a hard disk that's inside or connected to your computer. A floppy disk can also be a startup disk.

If your Macintosh cannot find a startup disk, it displays this icon in the middle of the screen:

If you see this icon, you have to install system software on your computer's internal hard disk (or an external hard disk that you turned on before you turned on your Macintosh).

❖ *If you've already installed system software* and you see this icon, you may need to reinstall system software. See "Starting Up With a Floppy Disk" later in this chapter. ❖

Installing, reinstalling, or updating system software

You use the Installer program to install, reinstall, or update system software on a hard disk that you want to be able to use as a startup disk.

△ **Important:** Before you install a new version of system software, make a backup copy of the old version on another disk in case you need it at a later time (to run a program that is incompatible with the new version, for example). △

When you use the Installer to update your system software, you keep any fonts, sounds, drivers, and other files you may have installed in addition to standard system software. (You could throw away your current System Folder and replace it with the newer one, but then you'd lose those special files.)

Before you begin

To install, reinstall, or update system software, you need

- an initialized hard disk
- the set of Macintosh system software disks that came with your computer or that you purchased as a separate system software kit. The Installer program is on the disk named *Install 1.*

If your Macintosh is connected to a network and you have access to the Installer program and system software on a file server or another computer, you don't need the system software disks. You can open the Installer program and then follow the procedure below, beginning with step 4.

If you have a hard disk that hasn't been *initialized* (that is, its icon doesn't even appear on the Macintosh desktop), go to Chapter 9, "Hard Disks and Floppy Disks," for instructions on initializing a hard disk.

▲ **Warning:** If you purchased a hard disk with the A/UX operating system installed on it, do not initialize that disk; doing so will erase A/UX. See the instructions that came with the A/UX operating system. ▲

Installing a standard system

The Installer program's Easy Install dialog box lets you install the standard system software on your Macintosh.

1. **Turn off your Macintosh.**
2. **Insert the *Install 1* disk into the internal floppy disk drive.**

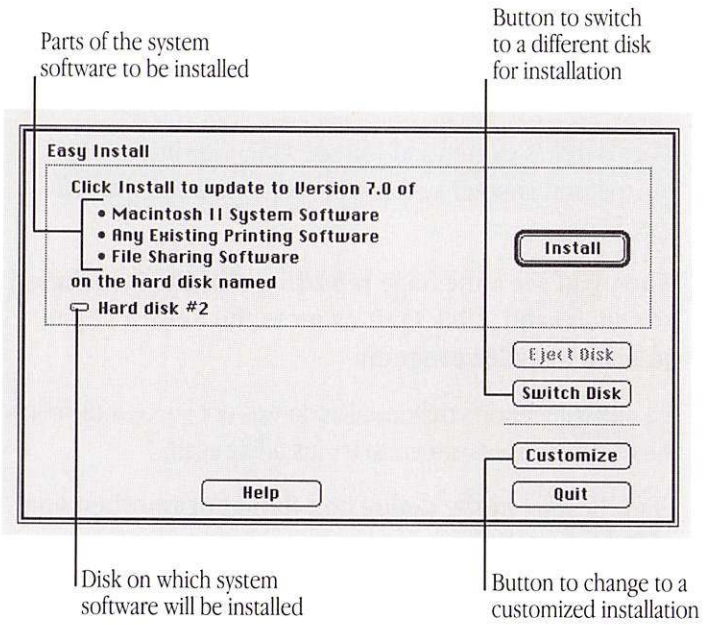
   If your Macintosh has two floppy disk drives, you can use either one.

3. **Turn on your Macintosh.**

   The Installer program opens automatically.

4. **Click OK or press the Return key on your keyboard.**

   The Easy Install dialog box appears.



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REFERENCE

5. **Make sure that the hard disk indicated in the box is the one you want to install system software on. If a different disk name appears, click the Switch Disk button until the correct disk name appears.**

6. **Click Install or press the Return key on your keyboard.**

   The Installer begins to install system software for your Macintosh model.

7. **Follow the instructions that appear on screen.**

   When a disk is ejected and you see a message instructing you to insert another system software disk, insert the disk specified.

8. **When you see a message reporting that the installation was successful, click Quit or press the Return key to quit the Installer program.**

   If a message reports that installation was not successful, follow the instructions on screen to try installing again.

9. **Click Restart in the dialog box that appears when you quit the Installer.**

   The Macintosh restarts using the newly installed system (or using your current startup disk if you already have one). If you want to change your startup disk, see "Designating a Hard Disk as the Startup Disk" in Chapter 9, "Hard Disks and Floppy Disks."

Installing a customized system

Custom installation allows you to select the combination of system files, drivers, and other files you want for your own specific needs. You can also use custom installation to install or update a single system software component or to save space on your startup disk by not installing files that you don't need.

1. **Turn off your Macintosh.**

2. **Insert the *Install 1* disk into the internal floppy disk drive.**

   If your Macintosh has two floppy disk drives, you can use either one.

3. **Turn on your Macintosh.**

   The Installer program opens automatically.

4. **Click OK or press the Return key on your keyboard.**

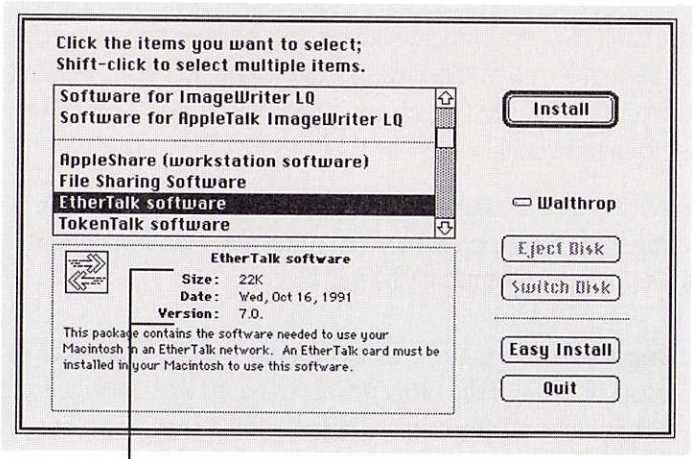
   The Easy Install dialog box appears.

5. **Make sure that the hard disk indicated in the box is the one you want to install system software on. If a different disk name appears, click the Switch Disk button until the correct disk name appears.**

6. **Click the Customize button.**

   The custom installation box appears. All parts of the system software are listed, and you have a choice of standard or minimal system software for each model of the Macintosh computer.

7. **Scroll through the list of items and hold down the Shift key as you click the items you want to install.**



Information about the item selected

❖ *If you want to install a small system* to conserve space on your startup disk, click the "Minimal software" option. ❖

△ **Important:** Be sure to install the system software files that your Macintosh uses to communicate with the printers and any other devices you use. △

8. **Click Install or press the Return key on your keyboard.**

The Installer begins to install system software for your Macintosh model.

9. **Follow the instructions that appear on screen.**

When a disk is ejected and you see a message instructing you to insert another system software disk, insert the disk specified.

10. **When you see a message reporting that the installation was successful, click Quit or press the Return key to quit the Installer program.**

If a message reports that installation was not successful, follow the instructions on screen to try installing again.

11. **Click Restart in the dialog box that appears when you quit the Installer.**

Make a backup copy of the System Folder or its contents on one or more floppy disks (or on another hard disk), and keep the disks in a safe place.

❖ *If your Macintosh is running System 6,* you cannot use desk accessories and TrueType fonts supplied with System 7. Also, you may notice extra or missing folders on any disk that contains System 7. The contents of the System 7 disk will appear normally when you resume running System 7. ❖

▲ **Warning:** Your startup disk must have only one System Folder. Having more than one System Folder on your startup disk can cause your Macintosh to malfunction and cause you to lose information. Use the Find command (in the Finder's File menu) to see if there is more than one System Folder on your hard disk. ▲

Starting up with a floppy disk

You need a hard disk as the startup disk to use Macintosh system software version 7, but if you're unable to use your hard disk, you can start up your Macintosh by inserting the *Disk Tools* disk in the internal floppy disk drive and then turning on your computer. This disk contains programs that you can use to initialize, test, and repair disks.

If your startup hard disk has malfunctioned, see "Testing and Repairing Disks" in Chapter 9, "Hard Disks and Floppy Disks."

Setting up your programs

In addition to setup information, this section describes how to work with more than one program at a time.

Installing a program

You can install many application programs simply by copying them from the original disk to your hard disk. (Some programs have specific installation procedures. See the instructions that came with your program.)

△ **Important:** Some program disks contain a System Folder. Whenever you copy the contents of a program disk to your startup hard disk, check that you have not copied an extra System Folder. If you have, throw away the extra System Folder. △

Put only one copy of each program on your hard disk. Having more than one copy of the same program on the disk can lead to problems when you're running the program.

If you want to open a program automatically when you start up your Macintosh, go to "Specifying Which Items You Want Opened at Startup" in Chapter 11, "Adapting Your Macintosh to Your Own Use" for instructions.

You can also put a program or an alias for it in the Apple menu, so you can open the program more conveniently. See "Installing an Item in the Apple Menu" in Chapter 11.

△ **Important:** Keep the original program disk in a safe place as a backup copy. If the program on your hard disk malfunctions consistently, you can replace it with a fresh copy from your backup disk. △

If a program malfunctions consistently, and installing a fresh copy of the program does not correct the problem, you may need to find out from the software manufacturer whether the version of the program you have is compatible with the Macintosh system software you're using. (You can often upgrade to the latest version of a program at no charge or for a modest fee.)

Checking for computer viruses

In recent years, "viruses"—malicious programs that damage files or erase disks—have become a significant problem for people who use computers. A virus can be introduced into your Macintosh system from a disk you or someone else puts in a disk drive, from a network device such as a file server, or from an electronic bulletin board service.

You can use any of several virus-detection and -elimination programs to check your Macintosh disks for viruses. Such programs are available from user groups, computer bulletin boards, and dealers.

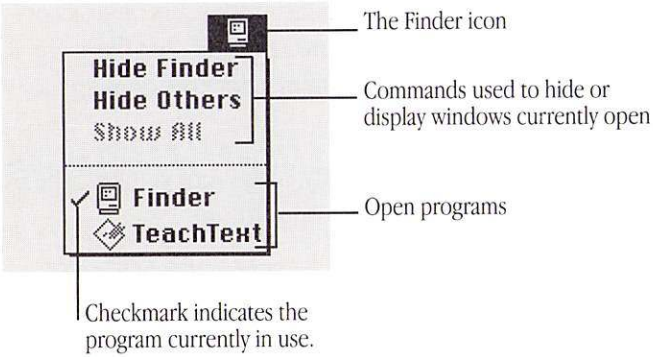
Even if you don't notice problems with your computer's operation or with the information on your disks, you should check for viruses frequently if you exchange disks or information with other users.

- Whenever you get a disk from anyone—even if it's commercial software—check it for viruses before using it or copying anything from it to your hard disk.
- Check your startup disk and other disks regularly with a virus-detection program and correct any problems it finds.
- If your Macintosh is on a network or you use a modem to connect with information services or bulletin boards, check for viruses as often as it's practical—ideally, each time you copy any information from an outside source.
- If you are part of a work group that includes a number of Macintosh users, set up a "virus-detection station" that everyone can use to check disks (and to copy the latest version of the virus-detection software your group uses).
- If you give information to other Macintosh users on disks or send information electronically, make certain that there are no viruses on your computer system before distributing the information.
- Since new viruses appear regularly, make sure you have the latest version of any virus-detection software.
- To avoid compatibility problems, be sure to use only one virus-detection program at a time.

Working with several programs at a time

You can keep as many programs and desk accessories open at the same time as your computer's memory allows.

All open programs are listed in the Application menu, which appears at the right end of the menu bar. The active program's name has a checkmark next to it, and its icon appears in the menu bar as the Application menu icon.



Switching programs

You switch between open programs or desk accessories by choosing their names from the Application menu in the right end of the menu bar.

If a program's icon is dimmed in the menu, that means its windows are hidden. You can choose it from the Application menu to display its windows.

You can also click in a window that "belongs" to an open program, or double-click a program icon (or the icon of a document that was created in the program) to make that program the active program.

Finding out what programs are open

If you have several programs and windows open, you can find out which program is active and what other programs are open by pulling down the Application menu.

Hiding and showing windows on the desktop

You can hide all the open windows except those of the active program by choosing the Hide Others command in the Application menu. Though hidden, the other windows remain available.

When the command takes effect, all windows except those belonging to the active program are hidden.

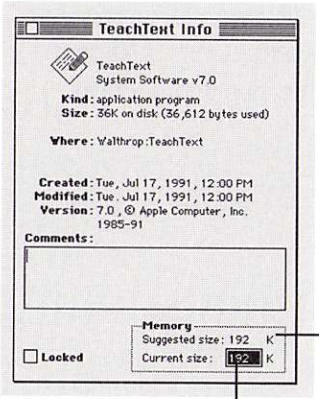
The windows remain hidden until you switch to another open program, at which time that program's open windows are displayed. If you want to see the windows of all your open programs, choose Show All from the Application menu.

Changing the amount of memory a program uses

On rare occasions you may need to increase or decrease the amount of memory a program sets aside for itself. You might want to increase the program's memory allocation so that you can open more documents at once, or you might want to decrease it so that you can open more programs. You can do this by adjusting the program's memory size in its Info window.

1. **Quit the program if it's open, then click the program's icon to select it.**
2. **Choose Get Info from the File menu.**

   The Info window appears.



Program manufacturer's suggested minimum memory

Current memory allocation

continues ▶

REFERENCE

3. **Drag across the number in the box labeled "Current size" to select it.**

4. **Type the number of kilobytes (K) of memory you want the program to set aside for itself.**

   Making the program smaller than the amount shown in the box labeled "Suggested size" may cause it to work more slowly or cause other problems.

5. **Close the Info window.**

   If you make the allocation too small, you'll see a message asking whether you want to make it smaller than the manufacturer's suggested minimum size.

▲ **Warning:** If you set the memory allocation for a program to a size that's smaller than the manufacturer's suggested minimum size, the program may function improperly or not at all. ▲

Chapter 9

Hard Disks and Floppy Disks

In this chapter

- Initializing disks
- Erasing a disk
- Designating a hard disk as the startup disk
- Protecting the information on a disk
  - Locking a floppy disk
  - Locking a file
  - Backing up your files
- If you can't save files on a floppy disk
- Ejecting a disk
- Disk care
  - Hard disk precautions
- Testing and repairing disks
  - Using Disk First Aid
  - Testing a hard disk

Initializing disks

Before you can use a new disk, you need to *initialize* it—to prepare it so that the computer knows where to store and retrieve information on the disk.

▲ **Warning:** You lose any information you may have on a disk when you initialize or reinitialize it. ▲

Most hard disks designed for use with the Macintosh are already initialized (that is, ready to store information) when they leave the factory. When new, the 3.5-inch (89-millimeter) floppy disks that your Macintosh uses need to be intialized.

Initializing a hard disk

If you have a hard disk that hasn't been initialized, its icon does *not* appear on screen when you start up your Macintosh using another hard disk or a floppy disk as a startup disk. (See Chapter 14, "Expanding Your Macintosh System," if you need instructions on connecting a hard disk to your computer. See Chapter 8, "Setting Up Your Macintosh System," if you need to create a startup disk.) Make sure that you turn on the hard disk before you turn on your Macintosh.

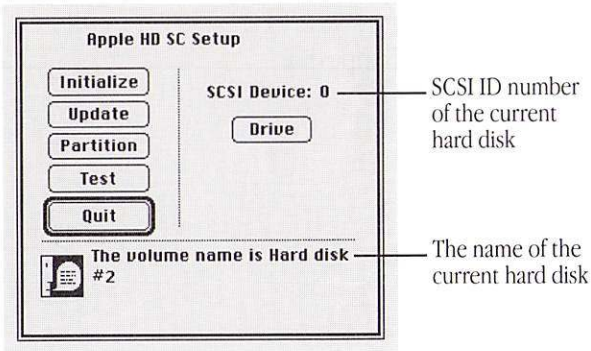
If your hard disk's icon does not appear on screen, use the Apple HD SC Setup program, on the system software floppy disk labeled *Disk Tools,* to initialize and name the disk.

▲ **Warning:** If you purchased a hard disk with the A/UX operating system installed on it, do not initialize that disk; doing so will erase A/UX. See the instructions that came with the A/UX operating system. ▲

1. **Locate the Apple HD SC Setup icon and open it.**

   Apple HD SC Setup is on the system software floppy disk labeled *Disk Tools.* If you're already using a hard disk as a startup disk, you can copy the program to your startup disk and open the program from there.

   A dialog box appears. The name of the hard disk currently selected for initialization is shown as the "volume name." The SCSI ID number of the selected hard disk is displayed above the Drive button. (The ID number of an internal hard disk is 0. The ID number of an external hard disk is usually preset to 5.)



2. **If the "volume name" or the SCSI ID number shown does not belong to the hard disk you want to initialize, click the Drive button until the hard disk you want to initialize is the selected hard disk.**

   You cannot initialize your current startup disk or the disk that the Apple HD SC Setup program is on.

3. **When the SCSI ID number (and name, if any) of the hard disk you want to initialize is shown, click the Initialize button.**

   A dialog box appears in which you must confirm or cancel your decision.

4. **Click the Init button to initialize the hard disk.**

   Messages appear to update you on the initialization process. If a message reports that initialization failed, begin the process again.

5. **In the dialog box that appears asking you to name the disk, type a name and then click OK.**

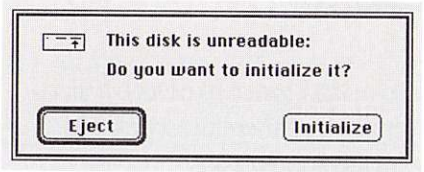
6. **Click Quit when the message reports that initialization was successful.**

Initializing a floppy disk

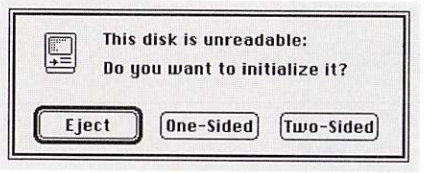
Before you can use a new floppy disk, you need to initialize it—prepare it so that the computer knows where to store and retrieve information on the disk.

1. **Insert your new floppy disk into the floppy disk drive.**

   If you inserted a high-density disk, this dialog box appears:



   If you inserted a double-sided (800K) disk, this dialog box appears:

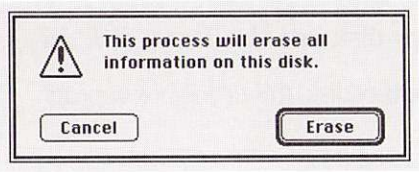


continues ▶

REFERENCE

2. **Depending on which dialog box appears, click Initialize or Two-Sided.**

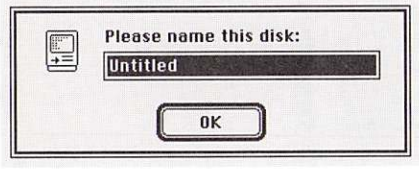
   Another dialog box appears:



   This dialog box gives you one last chance to cancel. It alerts you that you're about to erase—and therefore lose—any information that may be on the floppy disk.

3. **Click Erase.**

   A third dialog box appears:



4. **Type the name you want for the disk.**

   If you make any typing errors, press the Delete key to backspace over them.

   When you name a disk, you can type up to 27 characters, including spaces. You cannot use a colon in the name. If you don't name the disk, it will have the name "Untitled."

5. **Click OK or press the Return key on the keyboard.**

   The computer takes about a minute to initialize the disk. A series of messages appears on the screen to let you know how the process is going.

   When initialization is completed, the floppy disk's icon appears on the desktop. You can rename the disk by clicking its name and typing a new one.

Erasing a disk

Erasing a disk actually initializes it.

▲ **Warning:** You lose any information you may have on a disk when you erase it. ▲

1. **Click the icon of the disk you want to erase.**
2. **Choose Erase Disk from the Special menu.**

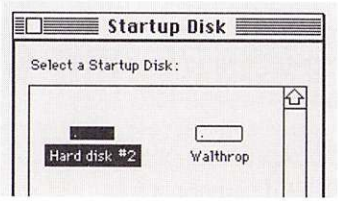
   A dialog box appears, giving you a chance to cancel the procedure.

3. **Depending on the type of disk you're erasing, click Initialize or Two-Sided.**

Designating a hard disk as the startup disk

If you use more than one startup disk with your Macintosh, you can specify which hard disk you want used as the startup disk the next time you turn on your computer.

1. **Choose Control Panels from the Apple menu and then open the Startup Disk control panel.**



2. **Click the icon of the disk you want to use as the startup disk.**

continues ▶

REFERENCE

3. Close the Startup Disk control panel.

When you turn on your Macintosh, it looks for a startup disk (a disk containing a System Folder) in the following sequence:

1. internal floppy disk drive
2. second internal floppy drive (if any)
3. external floppy drive (if any)
4. startup device selected in the Startup Disk control panel (if any)
5. internal SCSI hard disk (the computer waits a few seconds for the internal hard disk to warm up)
6. external SCSI hard disk (if there is more than one, it looks for the hard disk with the greatest SCSI ID number)
7. internal hard disk (the computer returns to this drive and waits another few seconds)

If no startup disk is found, the computer displays a blinking question mark in the middle of the screen.

❖ *If you want to bypass the internal hard disk as a startup disk,* press ⌘-Option-Shift when the computer starts up. ❖

△ **Important:** If you use any external hard disks, turn them on and wait a few seconds before you turn on your Macintosh; otherwise, the computer will not recognize them. △

Protecting the information on a disk

You can protect all the information on a floppy disk and you can lock individual documents and application programs. Another way to protect your work is to keep backup copies of all your files.

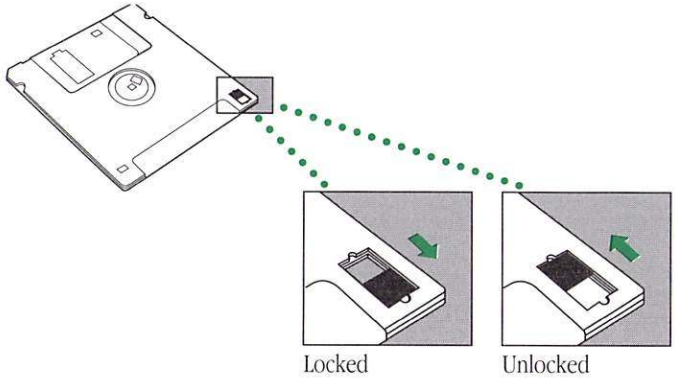
The information in a locked document or on a locked disk can't be changed or thrown away, but it can be opened or copied.

Locking a floppy disk

To lock a floppy disk:

- **Slide the tab on the back side of the disk so that the square hole is open.**

  Use your thumbnail to move the tab, or a push pin inserted into the notch next to the tab.



Sliding the tab back so that it covers the square hole unlocks the disk.

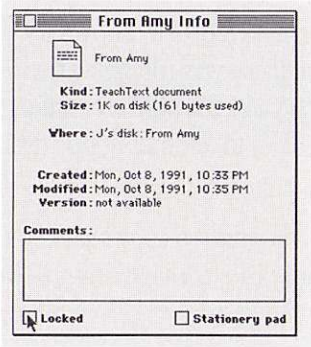
Locking a file

You use the Get Info command to lock a document or program. Locking a program may affect its operation.

1. **Click the icon of the file you want to lock.**
2. **Choose Get Info from the File menu.**

   The file's Info window appears.

3. **Click the Locked box in the lower-left corner so that an X appears in the box.**



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REFERENCE

4. **Close the Info window.**

- *Locking folders:* You can't lock a folder, but you can lock the items in a folder. Also, you can protect the contents of folders that you're sharing on a network. (See Chapter 13, "Using Your Macintosh on a Network," for more information.)
- *Locking an alias:* You can lock an alias, but doing so does not lock the original file. Locking an alias merely protects it from being thrown away.

Backing up your files

You can back up the work you store on a hard disk by copying individual files onto another disk in the usual way (dragging their icons to the icon of the other disk). You can back up the contents of an entire floppy disk by dragging its icon to another floppy disk icon or a hard disk icon.

You can also use a commercial backup program to copy some or all files from a hard disk to another hard disk, to a tape drive, or to a series of floppy disks.

If you can't save files on a floppy disk

If you can't save files on a floppy disk, then the disk is damaged or locked, it's too full to store more information, or the disk drive is not working properly.

- Make sure the locking tab on the back of the disk is in the unlocked position (so that the square hole is closed).
- If you see a message reporting that the disk is not initialized, and you know that it has been initialized, eject the disk and carefully insert it again. If the same message appears, the disk is probably damaged. (You may be able to recover the information on it with Disk First Aid or a disk-recovery program; see "Testing and Repairing Disks" later in this chapter.)
- If you see a message reporting that the disk is full, eject that disk and insert another that has adequate space for your document, or erase unneeded files from the disk.
- Check the disk for obvious damage to the plastic case or the sliding metal shutter.
- Insert a different disk and try saving again. If you can't save on the second disk, the problem may be with the disk drive.
- Before concluding that the disk drive is the problem, save your files on a disk in a different drive, if you have one, and then restart the Macintosh. Try using a disk that you know is not damaged in the suspect drive. See your service provider if you still can't save any files using that drive.

Ejecting a disk

You can eject a floppy disk by doing one of the following:

- Click the disk icon to select it and choose Put Away from the File menu. The icon disappears from the desktop.
- Drag the disk icon to the Wastebasket icon. The disk icon disappears from the desktop. (Dragging a disk to the Wastebasket does *not* erase the disk's contents.)
- Click the disk icon to select it and choose Eject Disk from the Special menu. The disk's icon remains on the desktop, but it's dimmed.

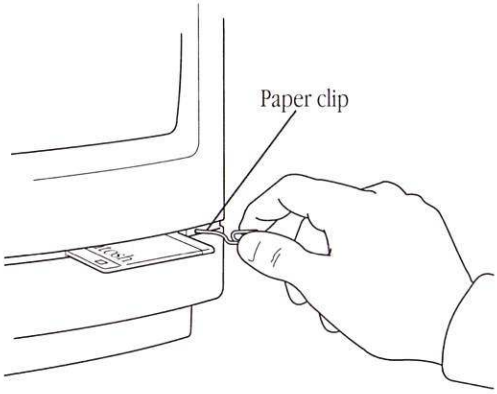
You can use the first two methods to remove a hard disk icon from the Macintosh desktop (or to remove an icon for a disk that you're connected to over a network).

All three methods also work with CD-ROM discs.

If you can't eject a floppy disk

The signal to eject the disk is not reaching the computer or the disk or drive is damaged.

1. **Hold down the ⌘ and Shift keys and press the number 1 key in the top row of the keyboard to eject a disk in the internal drive; press ⌘-Shift and the number 2 to eject a disk in an external floppy drive or the second internal drive.**
2. **If step 1 doesn't work, turn off the Macintosh. If the disk isn't ejected, then hold down the mouse button when you turn the computer on again.**
3. **If step 2 doesn't work, locate the small hole to the right of the disk drive's opening, and carefully insert the end of a large straightened paper clip into it. Push gently until the disk is ejected. Do not use excessive force.**



4. **If step 3 doesn't work, take the computer or disk drive to your authorized Apple service provider to have the disk removed.**

REFERENCE

Disk care

For information on floppy disk care, see Chapter 3, "Setting Up Your Programs," or read the instructions that came with your floppy disks.

Hard disk precautions

Hard disk drives are very delicate mechanisms and should be handled with care.

- Do not roughly handle a hard disk or a computer with an internal hard disk. Never move either when it's turned on and the hard disk drive is operating.
- Do not place your Macintosh on its side unless it is designed to operate this way; it could damage the hard disk. See your setup book to check if your Macintosh model can be placed on its side.
- Always keep the hard disk on a sturdy, level surface.
- Operate a hard disk at temperatures between 10 and 40 degrees Celsius (50 and 104 degrees Fahrenheit) and at a relative humidity of 20 to 80 percent.
- Do not spill any liquids on or near the drive.
- Do not expose the drive to hazardous vapors, such as those from cleaning solvents.

Testing and repairing disks

Both floppy disks and hard disks can become damaged from repeated use and handling. If you see a message reporting that a disk is damaged or unreadable, Disk First Aid or Apple HD SC Setup (both programs are supplied with the system software) may help diagnose and correct the problem.

If you can't start up from a hard disk or don't see its icon on the desktop, the computer does not recognize the disk or the disk drive is not working properly.

- If the hard disk drive is an external one, make sure it is turned on and its cable is connected firmly, then restart the Macintosh.
- If the disk drive is an internal one, turn off the Macintosh, wait at least 10 seconds, then turn it on again.
- If the hard disk is your startup disk, start up with a different disk and, if the disk's icon appears, reinstall the system software on the hard disk.
- If you have more than one hard disk in your Macintosh system, check the SCSI ID number of each external hard disk and all other SCSI devices connected to your computer. If two devices have the same ID number, or if any external device has the ID number 7 or 0, the computer will not recognize one of the devices.

Using Disk First Aid

You can test floppy disks and hard disks with the Disk First Aid application. Disk First Aid also repairs some types of disk damage.

1. **Locate and open the Disk First Aid icon.**

   Disk First Aid is on the system software disk labeled *Disk Tools.*

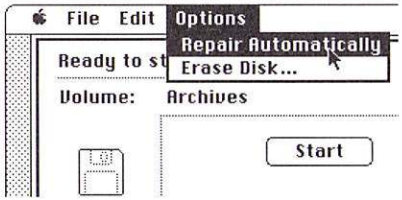
   A dialog box appears.

2. **Click the Drive or Eject button as necessary until the name of the disk you want to test appears. You may have to insert the damaged floppy disk.**

3. **Click Open or press the Return key.**

   The name of the disk you selected appears, and a message reports that Disk First Aid is ready.

4. **Choose Repair Automatically from the Options menu, or click the Start button to begin testing the disk.**



5. **When testing and repair are completed, choose Quit from the File menu.**

❖ *If you want to test another disk,* choose Close from the File menu, then select and open the other disk (as in step 2). ❖

If Disk First Aid doesn't correct the problem:

- Use Disk First Aid one or two more times with the disk. Occasionally, repeating this process corrects the problem.
- Use another disk repair or recovery utility. Some disk repair utilities let you recover information from a damaged disk.
- Consult a technician or other specialist for help.
- Once you have recovered all the information you can, erase (reinitialize) the disk. If reinitializing doesn't work, discard the damaged disk.

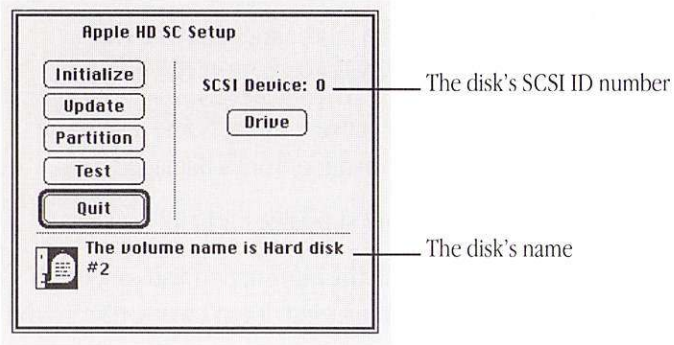
Testing a hard disk

You can test a SCSI hard disk with the Apple HD SC Setup program.

1. **Locate and open the Apple HD SC Setup icon.**

   Apple HD SC Setup is on the system software disk labeled *Disk Tools.*

   A dialog box appears.



2. **Click the Drive button until the name of the disk you want to test appears as the "volume name."**

3. **Click Test.**

   A dialog box appears asking you to confirm that you want to test the disk.

4. **Click OK.**

5. **When a dialog box appears telling you that testing is complete, click Quit.**

   If the test reveals a problem, you may be able to correct it by using Disk First Aid or another disk repair utility, or you may have to reinitialize the disk. Consult a technician or other specialist for assistance if necessary.

Chapter 10

Organizing Your Files

In this chapter

- Straightening up your files
- Using folders to organize your files
  - Creating and naming folders
- Saving your files where you want to
- Making items easier to find
  - Using an alias
  - Installing an item in the Apple menu
  - Moving an item to the desktop
- Finding a file or a folder
  - Finding an item by name
  - Finding an item by other characteristics
  - Finding items through a two-stage search
  - Uses of the Find command
- Creating a template
- Getting information about your files
  - Using the Info window
  - Using the View menu

Straightening up your files

Choose the Clean Up command from the Special menu to straighten up the icons in the active window or on the desktop. (The form of the Clean Up command changes depending on which items are active or selected.)

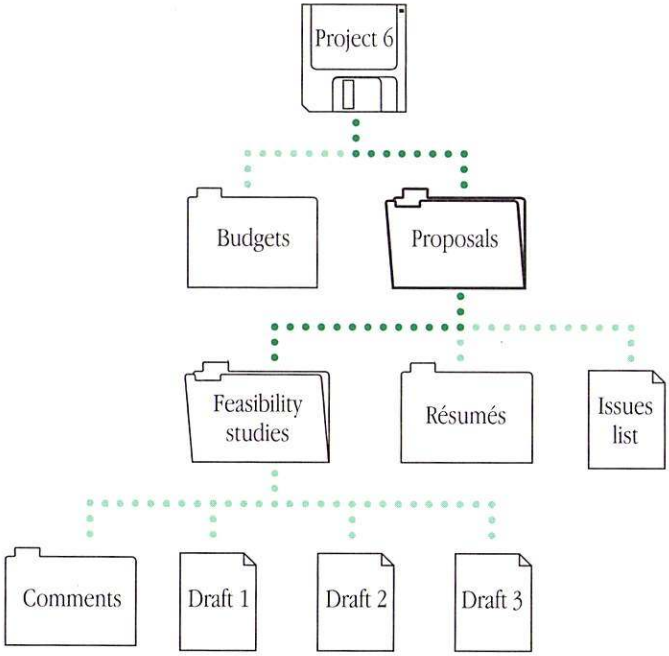
Hold down the Option key while choosing Clean Up Window to arrange icons alphabetically by name or according to the list view displayed most recently in that window. Holding down the Option key also moves the icons to the top left portion of the window.

Hold down the Option key while choosing Clean Up Desktop to line up icons near the right edge of the screen.

If one or more items are selected, holding down the Shift key while choosing the Clean Up command rearranges the selected items only.

Using folders to organize your files

Like paper filing systems, the Macintosh uses folders to store and organize documents. You can place one folder inside another to create a hierarchy of files that has many levels.



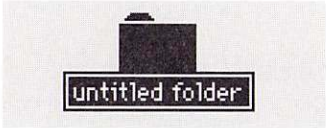
Creating and naming folders

Most programs let you create and name a new folder in the directory dialog box that appears when you first save a document, or when you choose Save As from the File menu to save another version of a document.

When you're working on the desktop (when the Finder is the active program), you create and name a new folder as follows.

1. **With the Finder the active program, choose New Folder from the File menu.**

   A new folder named "untitled folder" appears in the active window (or on the desktop if no window is active). The name is already selected.



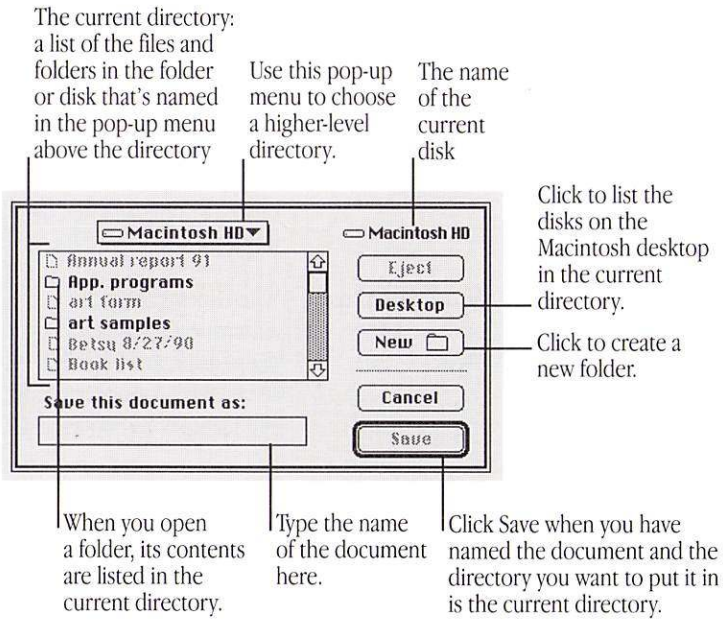
2. **Type a name for the folder and press Return.**

You move, copy, and remove folders in the same way that you do any other icons. (See the summary, "Working on the Macintosh Desktop," on the green pages after Chapter 16, for instructions.)

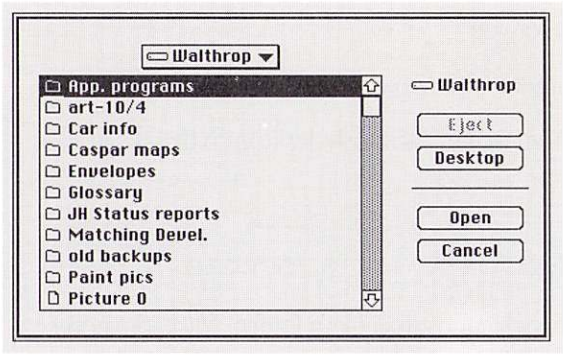
Saving your files where you want to

The first time you save a document that you're creating in an application program (or whenever you choose Save As from the File menu to create another version of a document), a *directory dialog box* appears. A *directory* is the list of files and folders contained in a folder or a disk.

You use the directory dialog box to name your document and decide where to store it. Directory dialog boxes vary slightly from program to program, but every directory dialog box has certain features.



A similar dialog box appears when you choose Open from the File menu to open a document that was created in the program you're currently in (the "active" program). The dialog box lets you find the document and open it.



REFERENCE

Making items easier to find

Your Macintosh offers several ways to make a file, folder, or other item easy to find and open. You can

- create aliases for the item and put the aliases wherever it's convenient for you
- install the item in the Apple menu
- move the item to the Macintosh desktop so that it's in plain sight

Using an alias

An alias serves as a signpost to a file, a folder, a disk, or another item (even a shared item that you access over a network). You can make as many aliases for an item as you want. See Chapter 6, "Organizing Your Work," for more information on aliases.

Creating an alias

1. **Click to select the item that you want to make an alias for.**
2. **Choose Make Alias from the File menu.**

   The alias appears on top of the original. Its name is in italics and ends with *"alias."* The name is already selected.
3. **If you wish, change the name of the alias, then move it to wherever you want to put it.**

Uses of aliases

Alias of	Location	Purpose
Any document or folder that could be stored in several places	Every part of your filing system where that item logically fits	Access to key information from several places
Apple Menu Items folder	On the desktop	Easy way to put items into or take items out of the Apple menu
A program that must be located with associated files	On the desktop; in the Apple menu	Starting the program without opening the folder or disk in which the original and its associated files are located
A document or folder stored on a separate archive disk	Anywhere on your primary disk or disks	When opened, the alias displays a message with the name of the disk needed, then opens the original when the disk is inserted.
A program, document, or folder on a file server	Anywhere on your primary disk or disks	When opened, the alias automatically finds and opens its original on the server, essentially creating an automatic server connection.

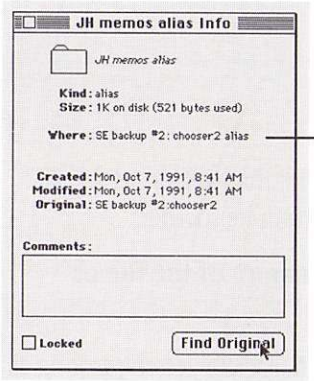
❖ *Trouble?* If you open an alias and nothing happens, or you see a message reporting that the original file isn't available, then the alias is damaged or the original has been deleted. Open the alias's Info window to find out where its original is. ❖

Locating the original of an alias

You can locate the original of an alias by opening the alias's Info window.

1. **Select the icon of the alias whose original you want to find.**
2. **Choose Get Info from the File menu.**

   The alias's Info window appears.



Location of the original—includes folder levels and disk name (if the original is on a different disk)

3. **Click the Find Original button.**

   The window containing the original item opens, with the item's icon highlighted.

   If you deleted the original, you'll see a message reporting that the original can't be found. Aliases are not deleted when the original files are deleted.

Installing an item in the Apple menu

You can install a file or other item in the Apple menu so you can open it by choosing it from the menu.

1. **Open the System Folder icon and locate the Apple Menu Items folder.**
2. **Locate the item you want to install in the Apple menu and drag it (or its alias) into the Apple Menu Items folder inside the System Folder.**

The item appears immediately in the Apple menu.

You remove an item from the Apple menu by opening the Apple Menu Items folder and dragging its icon (or its alias) out of the folder.

❖ *Trouble?* If the Apple menu does not contain the items it should, make sure that the Apple Menu Items folder is in the System Folder of your startup disk. Also, open the Apple Menu Items folder to check that all the items that you want in the menu are in the folder. ❖

Moving an item to the desktop

You can make an item easy to find by dragging its icon to the desktop. The icon stays there until you remove the disk on which the item is actually stored.

If you've placed an icon on the desktop, you can put it back in its original location by using the Put Away command.

1. **Click to select the item you want to put back in its original location.**
2. **Choose Put Away from the File menu.**

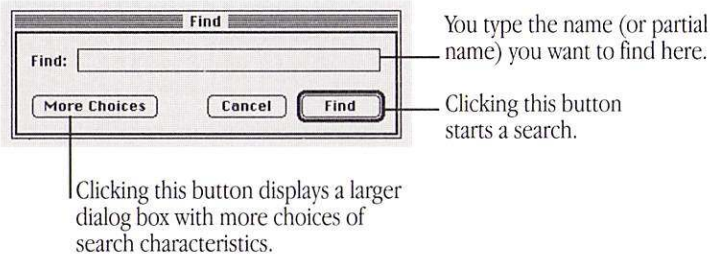
Finding a file or a folder

When the Finder is the active program, you can use the Find command in the File menu to find a file or folder on any disk whose icon is on the desktop. (The Find command cannot locate items inside the System file, such as fonts and sounds. You must open the System file to see its contents.)

Finding an item by name

1. **Choose Find from the File menu, or press ⌘-F.**

   The dialog box that appears lets you find a file or a folder by searching for its name.



   If the dialog box has more items in it than shown here, click the Fewer Choices button in the lower-left corner.

2. **Type the name (or part of the name) of the file or folder you want to find.**

   It doesn't matter whether you capitalize any letters, as long as the letters or numbers you type are in the name of the item you're looking for.

3. **Click the Find button.**

   The first item that matches the name (or partial name) you typed is shown highlighted in a Finder window. If no item is found, your Macintosh makes the alert sound.

4. **To see the next matching item, choose Find Again from the File menu, or press ⌘-G.**

   If no more items are found, your Macintosh makes the alert sound.

Finding an item by other characteristics

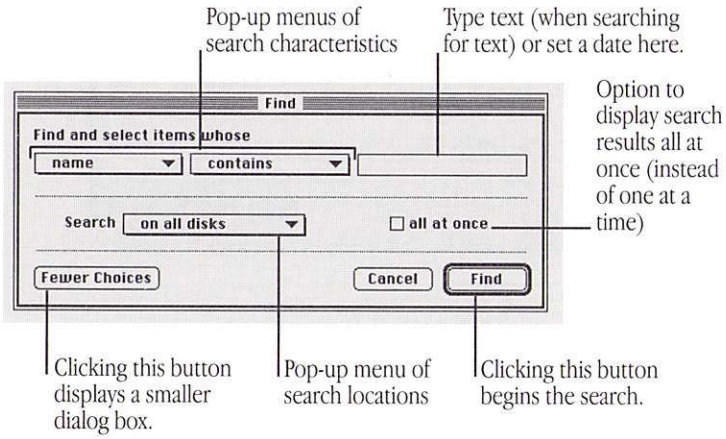
You can use the Find command to find a file or a folder by searching for its size, its label, the date it was created or modified, or other characteristics.

1. **Choose Find from the File menu.**

   The Find dialog box appears.

2. **Click the More Choices button.**

   The dialog box that appears lets you set different search characteristics through pop-up menus that together form a search order.



The content of the middle pop-up menu and the text area vary according to the item selected in the left pop-up menu.

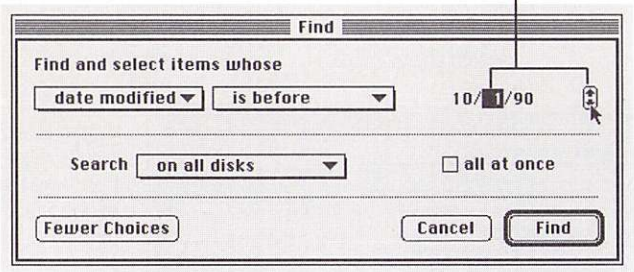
3. **Press the pop-up menu on the left to open it, drag to choose an item, and then release the mouse button.**

4. **Press the pop-up menu in the middle to open it, drag to choose an item, and then release the mouse button.**

continues ▶

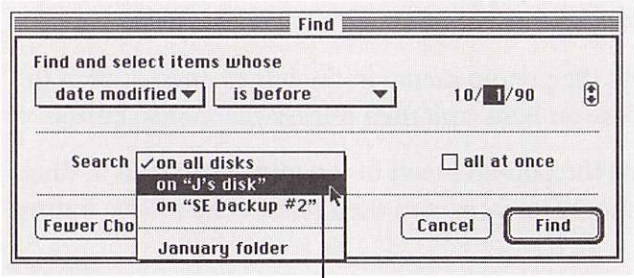
5. **Adjust the date, choose an item, or type text in the upper-right area of the dialog box.**

Clicking a number selects it; clicking the up or down arrow changes the selected number.



6. **Choose a search location from the pop-up menu labeled "Search."**

You can choose to search all disks, a specific disk, or the active Finder window.



Disk selected for searching

7. **If you want all found items displayed at once, click the checkbox labeled "all at once" so that an X appears.**

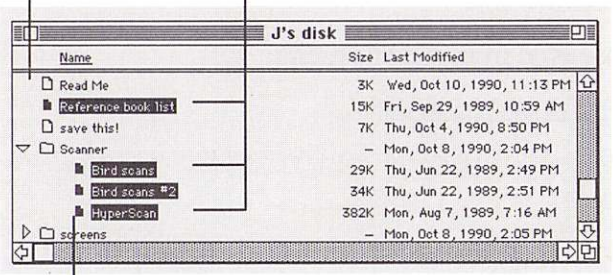
8. **Click the Find button when you've finished setting your search characteristics.**

The first item that matches your search characteristics is shown highlighted in a Finder window. To see the next item found, choose Find Again from the File menu (or press ⌘-G).

When the items found are displayed all at once, they are shown highlighted in one or more Finder windows.

A list view shows the contents of folders at all levels on the disk, in outline form.

Items found in the search are highlighted.



Indentation indicates that the item located is inside a folder.

Finding items through a two-stage search

You can use two sets of characteristics and locate the items that meet both sets of characteristics.

1. **Choose the first set of characteristics you want to search for.**
2. **Click the "all at once" box so that an X appears.**

   Checking "all at once" displays the items found highlighted in a list.
3. **Click the Find button.**

   The items found are shown highlighted in a Finder window.
4. **Choose the Find command again, before you click or take any other action.**

   You choose Find before taking any other action so the items located in the first stage of the search remain highlighted.
5. **Choose the second set of characteristics you want to search for.**
6. **Choose "the selected items" in the Search pop-up menu.**
7. **Click Find to begin the second stage of your search.**

   The search is limited to the items found in the first stage, and only those matching both sets of characteristics are highlighted.

Uses of the Find command

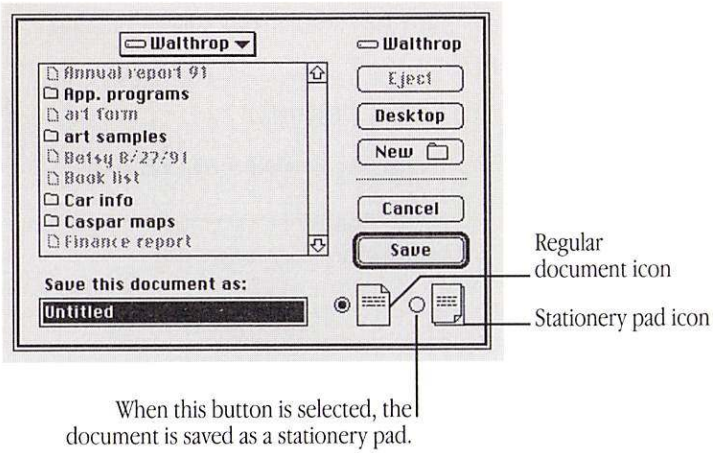
The Find command can help you locate files quickly, organize large quantities of documents, and develop an efficient system for backing up and archiving your work.

Search characteristic	Can be used to locate
Name	1. Files whose names you can't recall exactly 2. All items for which you use a standard name, such as status reports or expense reports
Kind	1. All application programs 2. All aliases
Size	Large files, to make space available on a disk
Label	All the files to which you added the same label (such as "top secret")
Lock	Locked files, to unlock them for editing
Modification date	All files changed since a certain date, for regular backup of new and changed files
Creation date	All files created before a certain date, for archiving or erasing outdated material

Creating a template

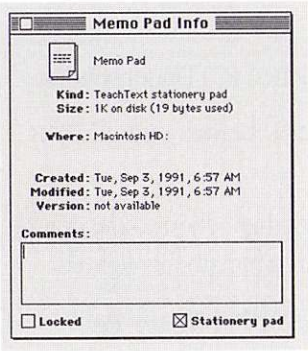
Most documents can be saved as or converted into a *stationery pad,* which is a template form of the document. The template retains the format and content it had at the time you made it into stationery, and you can use it repeatedly as a master for similar documents.

Many application programs let you save a document as a stationery pad when you first save the document or choose Save As from the File menu. If the directory dialog box that appears has a stationery pad option, you can click it to save your new document as a template.



If the program you're using does not offer a stationery pad option, you can use a document's Info window to create a stationery pad.

1. **Click to select the icon of the document you want to use as a template.**
2. **Choose Get Info from the File menu.**
3. **Click "Stationery pad" near the lower-right corner so that an X appears in the checkbox.**



Clicking "Stationery pad" converts the document from an ordinary document to a stationery pad.

4. **Close the Info window.**

The document icon has changed into a stationery pad icon.

When you open a stationery pad, an untitled window appears showing a blank "form" from that stationery, or a dialog box appears asking you to name the new document.

You cannot change the stationery pad itself unless you turn it back into a regular document. You do this by opening the stationery pad's Info window and clicking "Stationery pad" to remove the X.

Getting information about your files

When you're working on the desktop, you can choose the Get Info command from the File menu to get information about a file, such as when a document was created or how much memory a program needs.

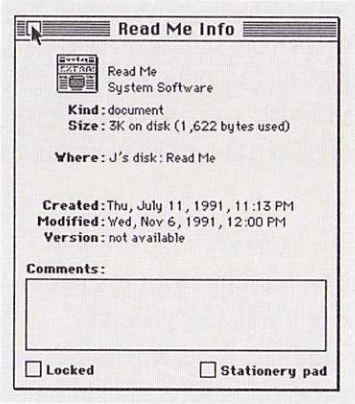
You can also use the View menu to see certain types of information about the files listed in a Finder window.

Using the Info window

The Get Info command displays information about a selected item in a window.

1. **Click to select the item you want information about.**

2. **Choose Get Info from the File menu, or press ⌘-I.**



Besides getting information, you can use the Info window to lock a file (so it can't be changed or thrown away), turn a document into a stationery pad, change a program's memory allocation, and change the file's icon. (See Chapter 11, "Adapting Your Macintosh to Your Own Use," for information on the last two procedures.)

You can type comments in the Info window and later search for them with the Find command.

3. **Click the close box.**

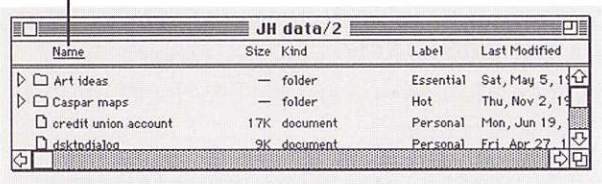
REFERENCE

Using the View menu

You can use the View menu to display the contents of a window by icon or small icon, or you can list them according to name, size, kind, date, or label. (See Chapter 11, "Adapting Your Macintosh to Your Own Use," for information on using the Views control panel to change how files are listed and what information is included.)

Windows are set to show items in the icon view. One of the list views (name, size, kind, label, or date) is useful when you have too many files to see easily as icons or if you want your files arranged according to a particular attribute. For example, listing documents by the date and time of their most recent modification makes backing up files an orderly task.

The type of list displayed is underlined.



When the contents of a window are displayed as a list and you want them arranged in another list view, you don't have to use the View menu. You can click a column heading (such as Size or the Last Modified date) to rearrange the list according to that heading.

See the summary, "Working on the Macintosh Desktop," on the green pages after Chapter 16 for information on using a list view to select items in different folders.

Chapter 11

Adapting Your Macintosh to Your Own Use

In this chapter

- Specifying which items you want opened at startup
- Installing an item in the Apple menu
- Installing files in the System Folder
- Changing the items in the Label menu
- Setting the time and date
- Setting a time for the Alarm Clock to go off
  - Turning the alarm off
- Adjusting the way the mouse works
- Adjusting the way the keyboard works
  - Controlling the pointer from the keyboard
  - Making keyboard shortcuts easier to type
  - Adjusting the keyboard for very slow typing
- Setting the alert sound
  - Installing a sound
  - Removing a sound
  - Recording sounds
- Changing the desktop pattern
- Adjusting the blinking of a menu item
- Adjusting the blinking of the insertion point
- Changing the way the contents of windows appear
- Changing the appearance of icons
  - Changing an icon
  - Assigning a label and a color to an icon
- Changing the highlight color
- Changing the color of windows
- Displaying colors or grays
- Configuring multiple monitors
- Adjusting screen brightness
- Magnifying the screen image
- Turning off the Empty Wastebasket warning
- Managing memory

Specifying which items you want opened at startup

To have a file (a program or a document) open automatically when you start up your Macintosh, drag the file's icon or its alias to the Startup Items folder, which is inside the System Folder. Any programs or documents (or their aliases) that you put in the Startup Items folder are opened when you start up your Macintosh. You can have as many files open automatically as your computer's memory allows.

If you no longer want a file to open automatically when you start up your Macintosh, remove the file's icon or its alias from the Startup Items folder.

Installing an item in the Apple menu

To have a program, document, or other item appear in the Apple menu, drag the item's icon or its alias to the Apple Menu Items folder, which is inside the System Folder.

You remove an item from the Apple menu by opening the Apple Menu Items folder and dragging the item's icon (or its alias) out of the folder.

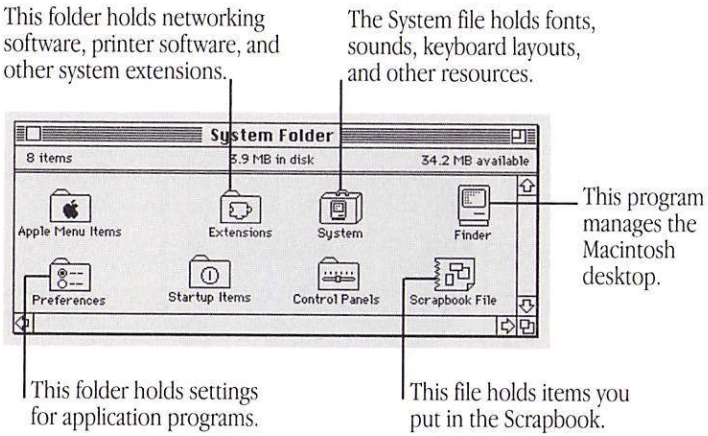
Installing files in the System Folder

Certain types of programs and other files need to be installed in the System Folder so your Macintosh can use them as part of the system software. These files include

- *system extensions* and *control panels* (also called INITs and CDEVs)
- files of preferences for application programs
- drivers for printers, scanners, and other devices
- sounds (instructions for installing sounds are in this chapter)
- fonts (see Chapter 12, "Printing," for instructions on installing fonts)

Usually, you install these files by dragging their icons to the System Folder icon (*not* the System Folder window). Sometimes these files are installed using an installer program that comes with the files. Check the instructions that came with the files for any specific installation procedure.

These files are stored in specific folders inside the System Folder. When you drag a file's icon to the System Folder icon, your Macintosh recognizes which type of file it is and stores the file in the appropriate folder.



If you drag one of these files to the System Folder window instead of the System Folder icon, the file is not stored in the appropriate folder automatically. Items you want in the Apple Menu Items folder or the Startup Items folder inside the System Folder need to be dragged to either folder directly. (See the instructions in this chapter for installing Apple menu items and specifying the files you want opened at startup.)

Removing files from the System Folder

You remove a file from the System Folder by dragging its icon out of the System Folder.

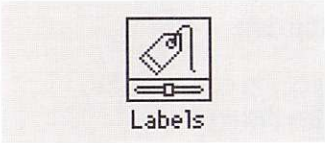
Depending on the external devices you use, whether or not you're on a network, and how you use your Macintosh, you can remove the following types of files from your System Folder if you want to conserve space on your startup disk:

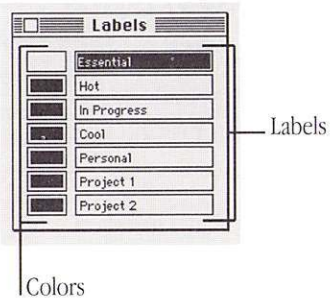
- drivers for printers or other devices you don't use (for example, the AppleTalk ImageWriter driver)
- networking drivers, if you are not on a network (such as AppleShare software)
- Apple menu items you don't use (you need the control panels, but you may not need the Calculator or the Puzzle, for example)
- extra fonts, sounds, or keyboard files you have installed

Be sure you have backup copies of the files on floppy disks before you remove them from your System Folder.

Changing the items in the Label menu

You can change the labels (and colors, if your monitor displays colors or shades of gray) available in the Label menu. You make these changes in the Labels control panel (choose Control Panels from the Apple menu and open the Labels control panel).



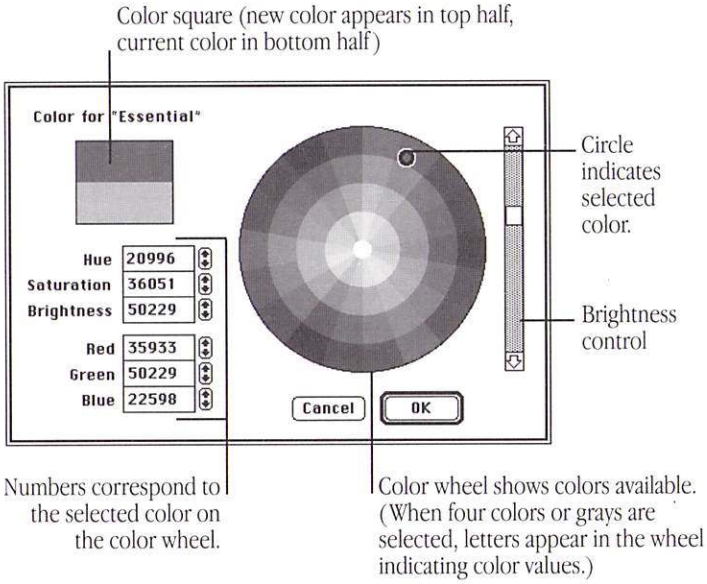


To change a label, drag across it to select it and then type your new label.

To change a color:

1. **Click the color you want to change.**

   The color wheel dialog box appears.



2. **Click a color on the color wheel to select it.**

   The new color is displayed in the top half of the color square. The current color remains in the bottom half of the square for comparison.

3. **To experiment with other colors or shades, drag the pointer around the wheel or click at another point on the wheel.**

   The new color is displayed in the upper half of the color square as you drag or click.

4. **Click OK when you have selected the color you want.**

   The color wheel dialog box closes.

5. **Close the Labels panel.**

The labels and colors you choose remain in effect until you change them.

Setting the time and date

Your Macintosh has a clock that keeps track of the time and date (a battery keeps it running when the computer is turned off).

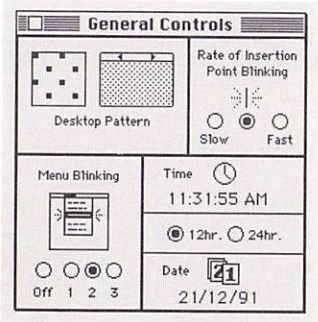
Many programs rely on the clock to automatically enter times and dates in documents you create or print, so sooner or later you will need to set the clock to the current time and date.

1. **Choose Control Panels from the Apple menu.**

   The Control Panels window appears, showing you the different control panels that are installed in your System Folder.

2. **Open the General Controls panel.**

   The General Controls window appears. The time and date adjustments are in the lower-right corner.



continues ▶

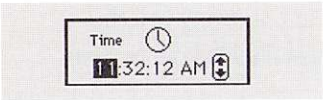
REFERENCE

3. **If you want to change the way the time is displayed (12-hour or 24-hour), click the appropriate button.**

   The 12-hour format uses A.M. and P.M.; the 24-hour format does not (1:30 P.M. is displayed as 13:30).

4. **Click the hours, minutes, or seconds in the time display to select them.**

   Up and down arrows appear to the right of the time display.



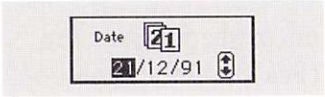
5. **Click the up or down arrows repeatedly until the current hour, minute, or second appears.**

6. **Repeat steps 4 and 5 as necessary to set the entire time display.**

7. **Click the clock icon (above the time display) to set the current time.**

8. **In the date display, click the month, day, or year to select it.**

   Up and down arrows appear to the right of the date display.



9. **Click the up or down arrows repeatedly until the current month, day, or year appears.**

10. **Repeat steps 8 and 9 as necessary to set the entire date display.**

11. **Click the calendar icon (next to the word "Date") to set the current date.**

12. **Close the General Controls window.**

You can also set the time and date in the Alarm Clock, which you open by choosing Alarm Clock from the Apple menu.

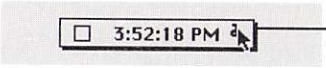
Setting a time for the Alarm Clock to go off

You can set the Alarm Clock to alert you when it's time for an appointment or a meeting.

1. **Choose Alarm Clock from the Apple menu.**

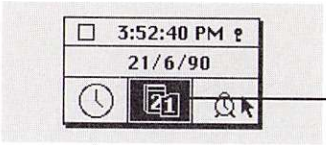
   The Alarm Clock opens.

2. **Click the upward-pointing lever near the upper-right corner to expand the Alarm Clock.**



Lever to make the Alarm Clock bigger or smaller

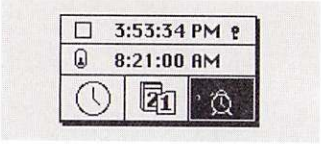
The lever points downward, and the Alarm Clock expands to its full size.



The highlighted icon indicates what's displayed in the middle section—the date, in this example.

3. **Click the alarm clock icon in the lower-right corner to select it.**

   The alarm clock icon is highlighted when you select it. The time that appears in the middle section is the current alarm clock setting.



4. **Click the hours, minutes, or seconds in the alarm clock setting to select them.**

   Up and down arrows appear to the right of the time display.

5. **Click the up or down arrows repeatedly until the hour, minute, or second when you want the alarm to go off appears.**

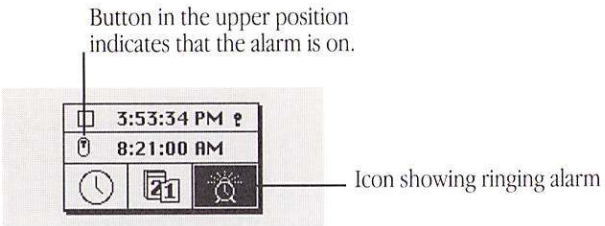
6. **Repeat steps 4 and 5 as necessary.**

continues ▶

REFERENCE

7. **Click the button to the left of the alarm clock setting to turn the alarm on.**

   When you click, the button moves up and the alarm clock icon changes to indicate that the alarm is turned on. (Clicking again turns the alarm off.)



8. **Click the close box to close the Alarm Clock.**

   The alarm will not go off unless you close the Alarm Clock or click the lever to make the alarm clock smaller, click elsewhere in the clock, or make another window active.

Turning the alarm off

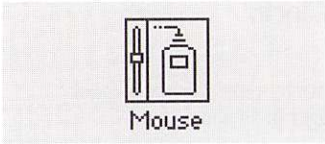
When the system clock reaches the time set for the alarm, the alert sound plays twice (the menu bar flashes once if the speaker volume is set to zero) and an alarm clock icon blinks over the Apple icon at the left end of the menu bar.

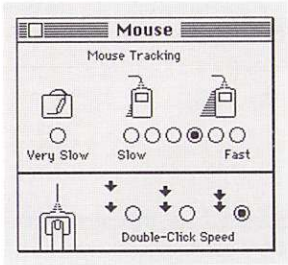
To turn off the alarm, choose Alarm Clock from the Apple menu and click the button to the left of the alarm clock setting so that the button moves down.

Adjusting the way the mouse works

You can adjust two aspects of mouse operation in the Mouse control panel: tracking, which is the relation between mouse movement on your desk and pointer movement on the screen, and double-clicking speed.

1. **Choose Control Panels from the Apple menu.**
2. **Open the Mouse control panel.**





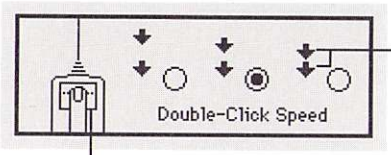
3. **Click the tracking speed you want.**

   If you click Fast, the pointer moves more than twice as fast as you move the mouse. The Very Slow option is useful for drawing with the mouse or a graphics tablet because the pointer moves at a constant speed relative to mouse movement.

   Your choice takes effect immediately and remains in effect until you choose a different tracking option.

4. **Click the double-clicking speed you want.**

   You may have to adjust the double-clicking speed if your Macintosh often interprets two clicks as a double click, or a double click as two single clicks.



The space between arrows corresponds to the interval between clicks.

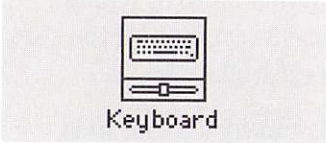
Mouse button highlights twice at the interval selected when you click a button.

Your choice remains in effect until you choose a different double-clicking speed.

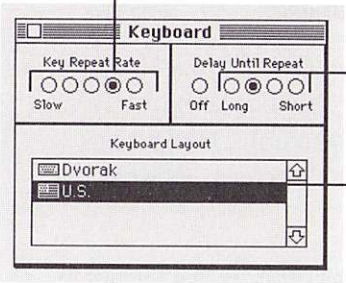
Adjusting the way the keyboard works

You can adjust the rate at which a character repeats when its key is held down as well as the delay before the character begins repeating. You can also change the keyboard layout.

1. **Choose Control Panels from the Apple menu.**
2. **Open the Keyboard control panel.**



Options for the speed at which a character repeats



Options for delay before a character begins repeating

Options for keyboard layout (if more than one keyboard layout is installed)

continues ▶

REFERENCE

3. **To adjust the rate at which a key repeats when it is held down, click the button for the rate you want.**

   After you close the control panel, your choice remains in effect until you change it.

4. **To adjust the delay before keys repeat, click the button for the delay you want.**

   If the keys repeat when you don't want them to, you should adjust the keyboard's sensitivity to your touch by setting a longer delay before a character begins repeating. (If you click the Off button, the keys don't repeat at all.)

   After you close the control panel, your choice remains in effect until you change it.

5. **To change the keyboard layout, click the name of the keyboard layout you want to use.**

   Depending on which country you bought your Macintosh in, you may have a choice of more than one keyboard layout. (Additional keyboard layouts are available from various sources, and you install them in the System Folder as you would fonts or sounds.)

   After you close the control panel, your choice remains in effect until you change it.

6. **Close the Keyboard control panel.**

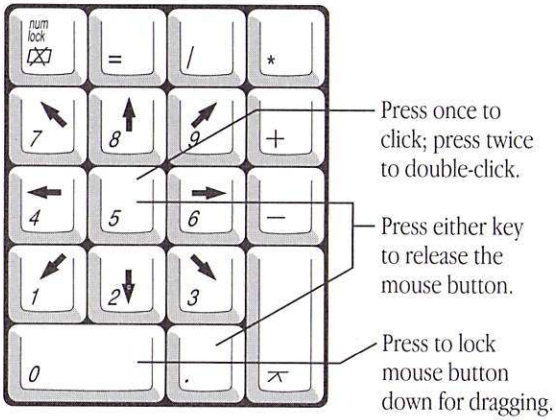
Controlling the pointer from the keyboard

With a Macintosh system software feature called Mouse Keys, you can use the numeric keypad on the right side of the keyboard (instead of the mouse) to control the movement of the pointer on the screen.

To turn Mouse Keys on, press ⌘-Shift-Clear (the Clear key is on the numeric keypad).

To turn Mouse Keys off, press Clear.

With Mouse Keys on, you can click, drag, and perform all the usual mouse actions from the numeric keypad. The 5 key serves as the mouse button: press once to click; press twice to double-click. The 0 key locks the mouse button down for dragging. The decimal point key (to the right of 0) or the 5 key unlocks the mouse button.



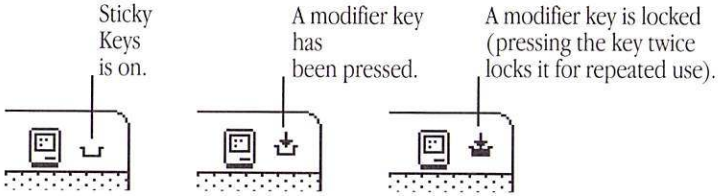
You can adjust how quickly the pointer moves on the screen and how long the delay is before the pointer starts moving when you press a mouse key. You make these adjustments in the Easy Access control panel (choose Control Panels from the Apple menu and open Easy Access).

Making keyboard shortcuts easier to type

With the Macintosh system software feature called Sticky Keys, you can type keyboard shortcuts (such as ⌘-S for the Save command) without actually pressing the keys simultaneously.

To turn Sticky Keys on or off, press the Shift key five times without moving the mouse.

With Sticky Keys on, you can type a keyboard shortcut by first pressing the modifier key (⌘, Option, Control, or Shift) and then pressing the character key. An icon in the right end of the menu bar (to the right of the Application menu icon) changes to indicate whether Sticky Keys is on and whether a modifier key has been pressed or locked.



You can have Sticky Keys make an alert sound when a modifier key is pressed. You set this option in the Easy Access control panel (choose Control Panels from the Apple menu and open Easy Access).

REFERENCE

Adjusting the keyboard for very slow typing

The Macintosh system software feature called Slow Keys lets you type very slowly and ignores accidental keystrokes by delaying the acceptance of the next keystroke.

To turn Slow Keys on or off, hold down the Return key for about four seconds, until an alert sound indicates that the feature is on or off.

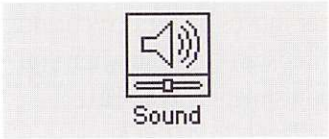
You can adjust how long you want Slow Keys to delay acceptance of the next keystroke. You can also set Slow Keys to make an audible click each time a key is pressed. You make these adjustments in the Easy Access control panel (choose Control Panels from the Apple menu and open Easy Access).

Setting the alert sound

Many programs have the Macintosh make a sound, called the alert sound, when your attention is required or when you're giving a command or attempting an action that the computer cannot recognize or perform at that time.

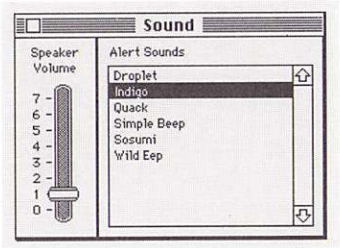
You can choose among several sounds that you want the Macintosh to make. You can also set the sound's volume.

1. **Choose Control Panels from the Apple menu.**
2. **Open the Sound control panel.**



The Sound window appears. The alert sound that your computer is currently using is already selected.

3. **Click the alert sound that you want the Macintosh to use.**



When you click a sound to select it, it's played at the current volume setting.

Your Macintosh may have sounds installed in addition to those shown here. It may also have additional features in its Sound control panel, such as controls for recording sounds. See "Recording Sounds" later in this chapter for information on recording sounds. For information on any additional features, go to the setup book that came with your Macintosh.

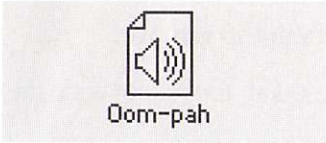
4. **Drag the slide control up or down to set the volume level.**

❖ *If you want to be alerted silently:* Drag the slide control to zero. Instead of hearing an alert sound, you'll see the menu bar flash. ❖

5. **Close the Sound control panel.**

Installing a sound

The Macintosh comes with a standard set of alert sounds. You can get additional sounds from various sources. To install a sound, you drag its icon to the System Folder icon (*not* the System Folder window). The sound is automatically installed in the System file, where it belongs.



Once you add a sound to the System file, it is listed in the Sound control panel.

REFERENCE

Removing a sound

You can remove sounds in the Sound control panel. Make sure you have a backup copy of the sounds on floppy disk before you remove them from your Macintosh system.

1. **Choose Control Panels from the Apple menu.**
2. **Open the Sound control panel.**
3. **Click to select the sound you want to remove.**

   Make sure you select the correct sound. You cannot undo the next step.
4. **Choose Cut or Clear from the Edit menu.**
5. **Close the Sound control panel.**

You can also remove a sound by dragging its icon out of the System file and out of the System Folder. If your Macintosh can record sounds, you can remove a sound by clicking to select it and then clicking the Remove button.

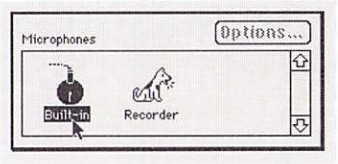
Recording sounds

Some Macintosh models (such as the Macintosh LC) can accept and process sound input. These computers come with a sound input port, to which you can connect either a microphone (to record sounds that you create) or a phono jack adapter (to record sounds from another audio source such as a compact disc or an audio cassette).

You can record a sound and add it to your available alert sounds in the Sound control panel. Make sure you've connected a microphone to your Macintosh as described in the setup book that came with your computer.

1. **Choose Control Panels from the Apple menu.**
2. **Open the Sound control panel.**

   The Sound control panel appears. Icons representing the available sound input devices appear near the bottom of the window.
3. **Click the icon that represents the sound input device you want to use.**

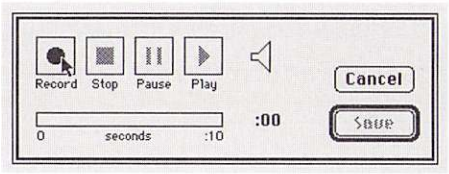


4. **Click the Add button.**

   A dialog box that looks like the controls of a tape recorder appears.

5. **To record your new sound, click the Record button.**

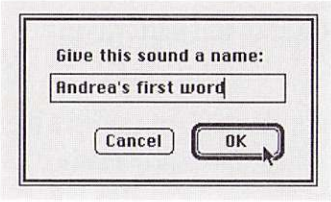
   Recording begins immediately; you have ten seconds to record your sound. There is no recording volume control.



6. **Click Stop to stop recording.**
7. **To listen to the sound you recorded, click Play.**
8. **To save the sound you recorded, click Save.**

   A dialog box appears in which you name your new sound.

9. **Type a name for the sound.**
10. **Click OK.**



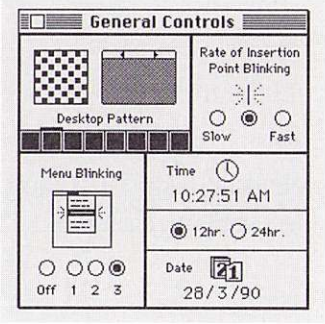
The new sound appears in the Alert Sounds list in the Sound control panel.

When you're finished recording new sounds, close the Sound control panel.

Changing the desktop pattern

You can change the pattern that appears on the Macintosh desktop in the General Controls panel.

1. **Choose Control Panels from the Apple menu.**
2. **Open the General Controls panel.**



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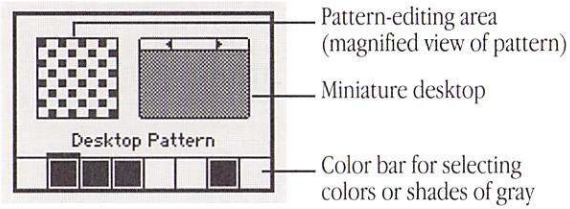
REFERENCE

You can choose from a variety of patterns provided for the Macintosh desktop, or you can create your own design by editing one of the patterns supplied. If your Macintosh can display colors or shades of gray, you can also select your own colors to use in the pattern.



3. **To see the patterns available, click either of the small triangles at the top of the miniature desktop on the right side of the Desktop Pattern area.**

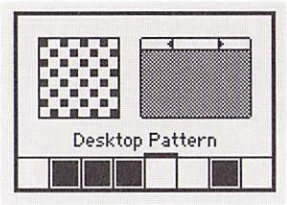
   The pattern changes each time you click.

4. **To choose a pattern, click the miniature desktop to see the new pattern on your desktop.**

   The new pattern replaces the current pattern for the desktop. The desktop pattern remains in effect until you change it.

5. **To edit a pattern, click in the square to the left of the miniature desktop.**

   Each dot in the square changes color when you click it. Your changes are displayed in the miniature desktop.



6. **To use another color, click the color in the color bar (under the words "Desktop Pattern") to select it, then click the dots you want to change.**

   You can also change the color of an existing pattern by double-clicking a color in the color bar and choosing a new color from the color wheel in the dialog box that appears.

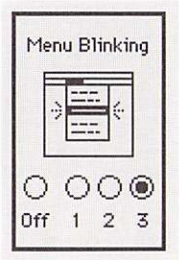
7. **When you've finished creating your new pattern, click in the miniature desktop to display the pattern on your desktop.**

   By double-clicking in the miniature desktop, you can save the new pattern. Otherwise it is lost when you display another pattern in the miniature desktop.

Adjusting the blinking of a menu item

You can change the number of times a menu item blinks when it's chosen. You make this adjustment in the General Controls panel (choose Control Panels from the Apple menu and then open the General Controls panel).

To adjust menu blinking, click the button for the number of times you want the menu item to blink. Clicking the Off button prevents a menu item from blinking.

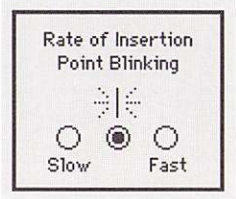


The option you selected remains in effect until you change it.

Adjusting the blinking of the insertion point

You can adjust how quickly the insertion point blinks (the insertion point indicates where any text you type will appear). You make this adjustment in the General Controls panel (choose Control Panels from the Apple menu and then open the General Controls panel).

To adjust the blinking of the insertion point, click the button for the blinking rate you want.

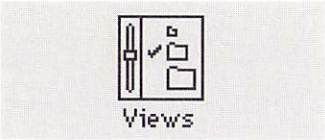


When you click, the insertion point in the control panel shows the rate of blinking you selected.

The option you selected remains in effect until you change it.

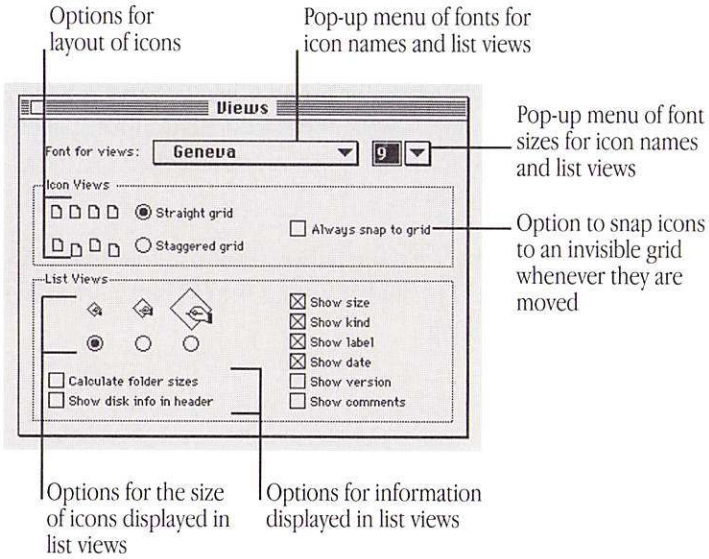
Changing the way the contents of windows appear

You can change the way the contents of Finder windows are displayed in the different views available from the View menu (icon view, small icon view, and the list views by name, size, kind, label, and date). You make these changes in the Views control panel (choose Control Panels from the Apple menu and open the Views control panel).



Use the Views control panel to change

- the font and font size used in all views (press to open the pop-up menu, then drag to choose a font or a size)
- the arrangement of icons or small icons in icon and small icon views
- the size of icons used in list views
- what information is included in list views, including folder sizes and the amount of available space on disk



The options you select remain in effect until you change them. (See the summary, "Working on the Macintosh Desktop," on the green pages after Chapter 16 for more information about using windows and list views.)

Changing the appearance of icons

You can customize icons by changing the icons themselves. If your Macintosh displays color or shades of gray, you can have icons appear in a specific color that's associated with a label.

Changing an icon

In a graphics program, you can create or copy the picture you want to use as an icon, and then paste it into an icon's Info window.

Some icons can't be changed, including those for control panels and other parts of the system software. Every icon fits inside a 32-pixel square. (A pixel, or *picture element,* is the smallest dot you can draw on the screen.)

1. **In a graphics program, select the picture you want to use for the icon.**

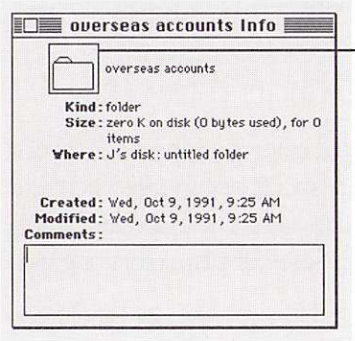
A moving dashed line indicates the selected area in many graphics programs.

2. **Copy the picture by choosing Copy from the Edit menu.**
3. **Switch to the Finder, then click to select the icon you want to change.**
4. **Choose Get Info from the File menu.**

   The icon's Info window appears.

5. **Click the icon at the upper-left corner of the Info window to select it.**

   A box appears around the icon when it's selected. If no box appears when you click, the icon can't be changed.



A box around the icon indicates that it's selected.

continues ▶

REFERENCE

6. **Choose Paste from the Edit menu.**

   The picture you copied replaces the selected icon in the Info window. If the picture is bigger than the icon, it automatically shrinks to fit.

7. **Click the close box to close the Info window.**

   You can change an icon back to its original by clicking the picture in the upper-left corner of the Info window and choosing Cut from the Edit menu.

Assigning a label and a color to an icon

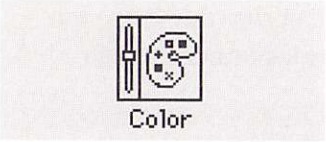
You can add a label and its associated color to each icon. A label is different from the icon's name. The label is visible only when the contents of a window are displayed as a list. The associated color is visible whenever the Macintosh is set to display colors or grays.

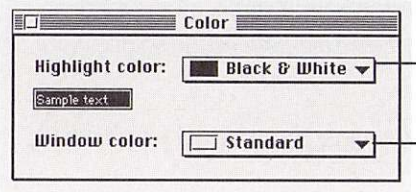
Labels provide a way to group related files (choose By Label from the View menu). If you have a color monitor, you can identify related icons by assigning a label and its color to each group.

To assign a label and color to an icon, click the icon to select it and then choose the label (and its color) that you want from the Label menu.

Changing the highlight color

If your Macintosh displays colors or shades of gray, you can change the color your Macintosh uses to highlight selected text on the screen. You make this adjustment in the Color control panel (choose Control Panels from the Apple menu and open the Color control panel).





Pop-up menu of choices for highlight color

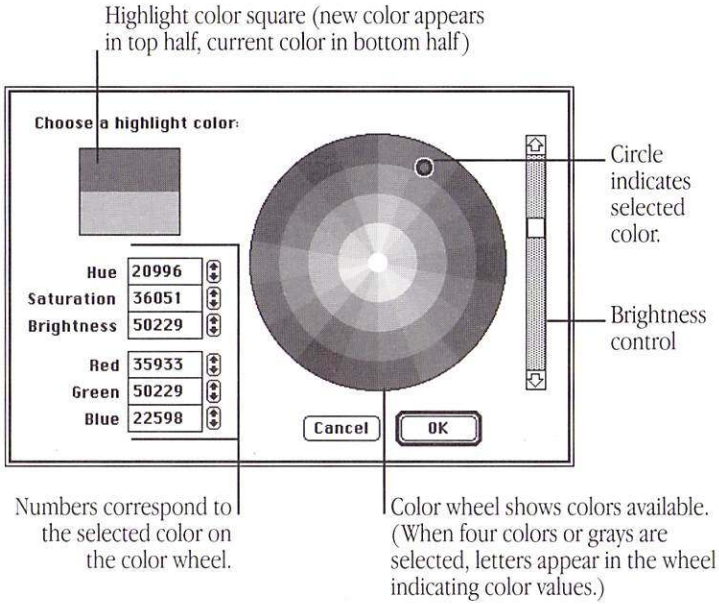
Pop-up menu of choices for window color

You can also use the Color control panel to change the color of window borders (go to "Changing the Color of Windows" in this chapter).

1. **Press the "Highlight color" pop-up menu to open it and drag to choose a color or choose Other.**

   If you choose a color, it appears in the "Sample text" box when you release the mouse button.

   If you choose Other, the color wheel dialog box appears.



2. **To change the brightness of the color wheel, drag the scroll box up or down.**

3. **Click a color on the color wheel to select it.**

   The new color is displayed in the top half of the color square if your monitor is set to display 16 or more colors or grays. The current color remains in the bottom half of the square for comparison; you can click there to go back to it.

4. **To experiment with other colors or shades, drag the pointer around the wheel or click at another point on the wheel.**

   The new color is displayed in the upper half of the color square as you drag or click.

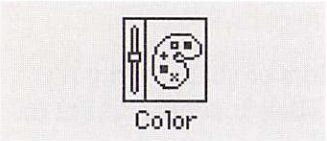
5. **Click OK when you have selected the color you want.**

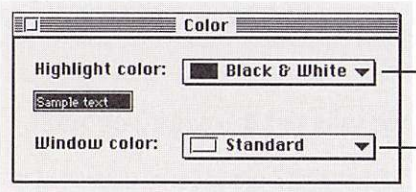
   The dialog box closes. The new highlight color is displayed in the "Sample text" box in the Color control panel.

The highlight color you specified takes effect immediately and remains in effect until you change it.

Changing the color of windows

If your Macintosh displays colors or shades of gray, you can change the color of window borders. You make this adjustment in the Color control panel (choose Control Panels from the Apple menu and open the Color control panel).





You can also use the Color control panel to change the color your Macintosh uses to highlight selected text on the screen (go to "Changing the Highlight Color" in this chapter).

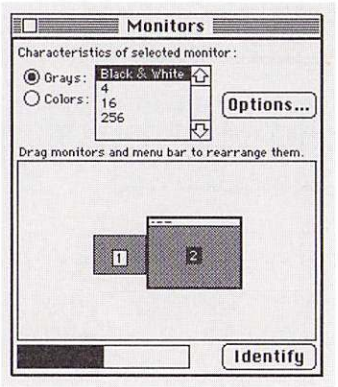
To change the color of window borders, press the pop-up menu labeled "Window color" to open it and then drag to choose a new color.

The color you choose takes effect immediately and remains in effect until you change it.

Displaying colors or grays

If your Macintosh displays colors or shades of gray, you can designate the number of colors or shades of gray you want displayed. (How many colors or shades your Macintosh can display depends on the video capability it has. See the setup book that came with your Macintosh and the instructions that came with your monitor for more information.)

You set the number of colors or grays in the Monitors control panel (choose Control Panels from the Apple menu and open the Monitors control panel).



You also use the Monitors control panel to configure your monitors if you have more than one (go to "Configuring Multiple Monitors," the next section in this chapter).

1. **If you have more than one monitor, click the icon of the monitor whose colors you want to adjust.**

   A dark border appears around the icon to show that it is selected.

2. **Click the Grays or the Colors button.**

   Some monitors can display only shades of gray, even if you click the Colors button.

3. **Click the number of colors or shades of gray you want displayed on the selected monitor (or click Black & White).**

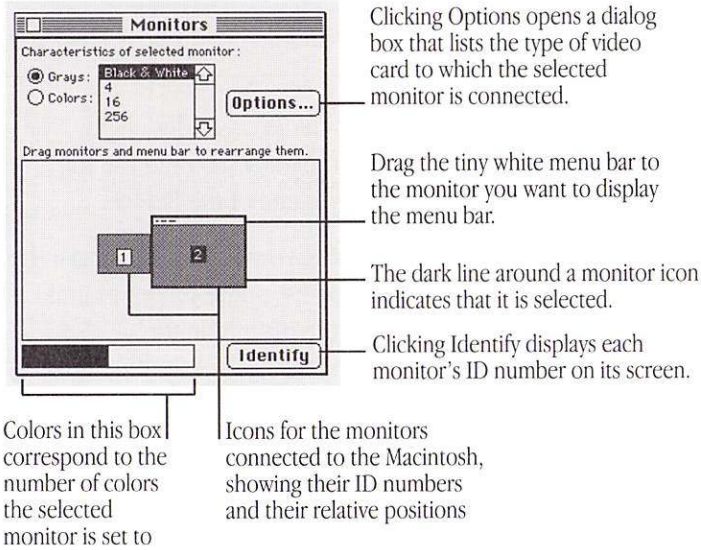
Your changes take effect immediately. The number of colors or shades of gray you specified remains in effect until you change it.

❖ *If your Macintosh has built-in video* (you didn't have to install a video card in your Macintosh before you could connect a monitor), increasing the number of colors or grays you want displayed increases the amount of memory your Macintosh uses for its video display and *decreases* the amount of memory available to run your programs. Your programs' performance may suffer as a result. If you want to change the amount of memory set aside for video, click the Options button in the Monitors control panel and click the appropriate buttons in the dialog box that appears. ❖

Configuring multiple monitors

If you use more than one monitor with your Macintosh, you need to indicate the monitors' positions and designate one as the main monitor (the one that displays the menu bar).

You make these adjustments in the Monitors control panel (choose Control Panels from the Apple menu and open the Monitors control panel).



You also use the Monitors control panel to set the number of colors or shades of gray you want displayed (go to "Displaying Colors or Grays" in this chapter).

1. **Check the ID numbers of your monitors by clicking the Identify button.**

   A large number appears in the center of each monitor's screen; it corresponds to the number of the icon in the control panel.

   The ID numbers help you identify which icon belongs to which monitor.

2. **Decide which monitor is your main monitor and drag the menu bar to the top of that monitor icon.**

   The menu bar snaps to the top of that monitor icon when you release the mouse button.

   If one of your monitors displays colors or shades of gray, you may want to make it the main monitor so you can use the color capabilities of your programs and of the Finder.

   If your monitors are different sizes, you may want to make the largest one the main monitor because some programs limit their window size to the size of the main monitor.

3. **Drag the icons of the other monitors to their positions relative to the main monitor.**

   To avoid becoming disoriented when you're using the monitors, position the monitor icons so that they correspond to their actual positions on your desk.

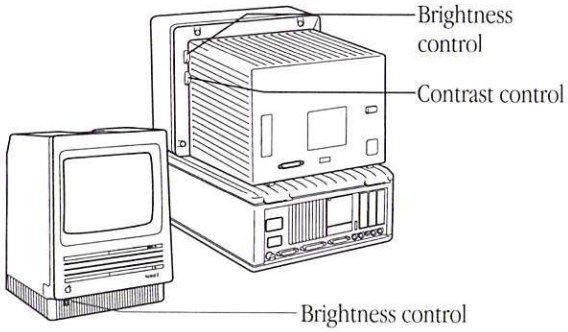
   The pointer can cross from one screen to another where the monitors' icons touch in the control panel.

4. **Choose Restart from the Special menu.**

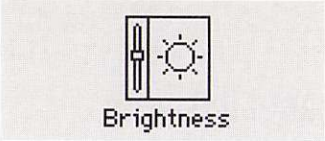
   The positions you specified remain in effect until you change them and restart your computer.

Adjusting screen brightness

Most Macintosh models have brightness and contrast dials on the monitor or a brightness dial on the computer itself. See the setup book that came with your computer or the instructions that came with your monitor for more information.



A few models do not have brightness and contrast dials. If your Macintosh does not have such dials, you adjust screen brightness in the Brightness control panel (choose Control Panels from the Apple menu and open the Brightness control panel).



To adjust screen brightness in the Brightness control panel, drag the slider control to the left or the right.

❖ *Tip:* Turn down the brightness if you'll be away from your computer for a while. If an image is left on the screen for several hours or more, it may begin to "burn in" and damage the screen. You can use "screen saver" programs, available from various sources, to dim the screen automatically or display a moving image after a set period of inactivity. ❖

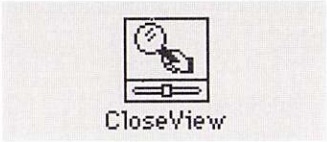
Magnifying the screen image

The CloseView control panel lets you magnify the image on your Macintosh screen up to sixteen times. It is supplied on one of the Macintosh system software disks.

CloseView is not automatically installed by the Installer program when you install system software.

To install CloseView:

1. **Locate the CloseView control panel.**



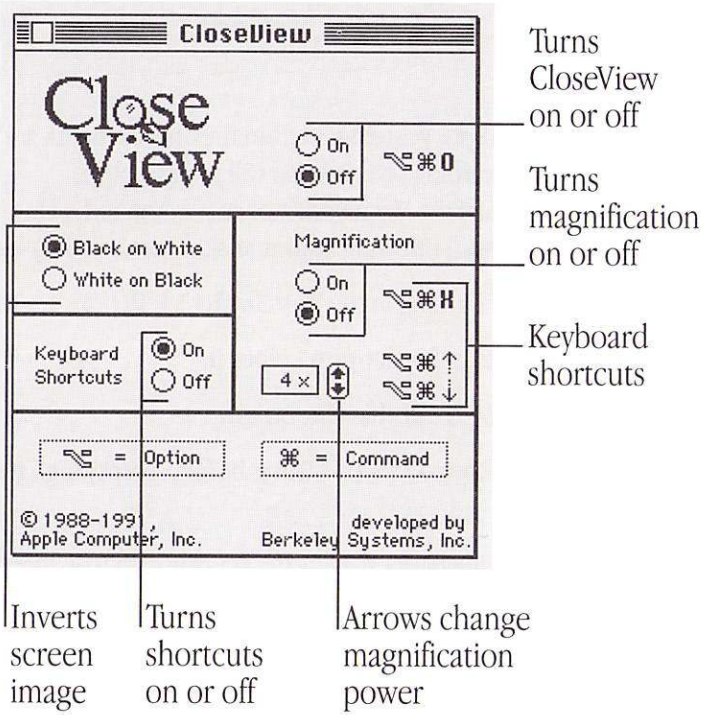
2. **Drag the CloseView icon to the System Folder icon (*not* the System Folder window) on your startup disk.**
3. **Choose Restart from the Special menu.**

To turn CloseView on or off, press ⌘-Option-O.

To turn the magnification on or off, press ⌘–Option–X. (When CloseView is on and the magnification is off, a rectangle on the screen indicates which area will be magnified. You can move the rectangle by moving the pointer.)

To increase or decrease magnification, press ⌘–Option–Up Arrow or ⌘–Option–Down Arrow.

You can set additional options in the CloseView control panel (choose Control Panels from the Apple menu and open the CloseView control panel):



REFERENCE

Turning off the Empty Wastebasket warning

When you choose Empty Wastebasket from the Special menu, a dialog box appears warning you that you will not be able to recover the contents of the Wastebasket once it's emptied. (The warning helps you avoid throwing away items unintentionally.)

You can turn off this warning in the Wastebasket's Info box.

1. **Click the Wastebasket icon to select it.**
2. **Choose Get Info from the File menu.**
3. **Click the checkbox labeled "Warn before emptying" to remove the X.**

   To turn the warning back on, click the checkbox so that an X appears.

You can also override the Empty Wastebasket warning when it is on by holding down the Option key when you choose the Empty Wastebasket command.

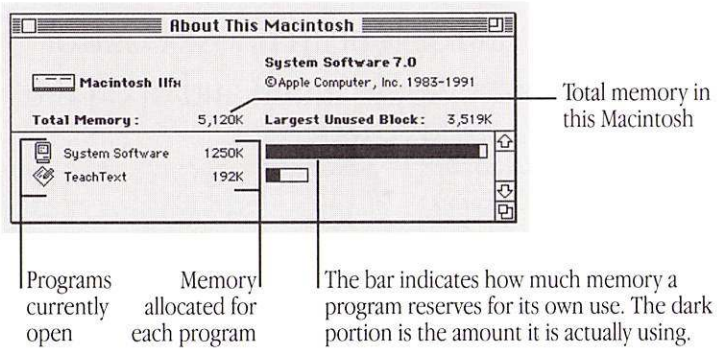
Until you choose the Empty Wastebasket command, items in the Wastebasket continue to occupy space on your disk.

Managing memory

Occasionally you may need to make adjustments in how your Macintosh uses its random-access memory (RAM) in order to work efficiently with large programs or with several programs at once.

Checking memory use

You can find out how much memory your Macintosh has, how much of it is not being used, and how much memory is being used by each program you have open. You find this information by making the Finder the active program and choosing About This Macintosh from the Apple menu.



Your Macintosh must have at least 2 megabytes (MB), or 2048 kilobytes (K), of RAM to use System 7.

You can adjust how much memory a program sets aside for itself when you open it (go to "Setting Up Your Programs" in Chapter 8, "Setting Up Your Macintosh System," for instructions).

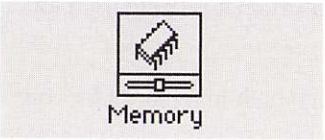
If you're unable to open a program or use network services such as printers or electronic mail, you may have to quit from one or more programs to free some memory for what you want to do. You can also restart your Macintosh to reset the way its memory is being used.

Adjusting the disk cache

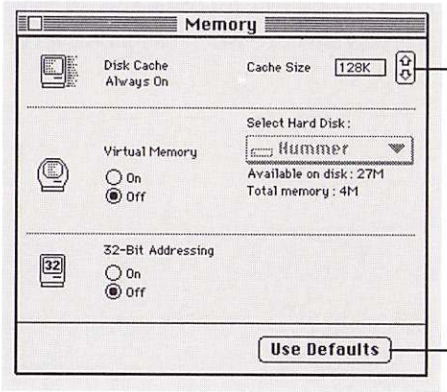
The disk cache is memory set aside to help programs work more quickly and efficiently. The memory in the disk cache is not available for opening more programs or documents, so the size of the disk cache affects how many files you can have open at the same time.

The preset and maximum sizes of the disk cache depend on the amount of memory your Macintosh has. If you often want to open more programs than memory allows, set the disk cache to a smaller size—such as 32K or 64K.

You set the size of the disk cache in the Memory control panel (choose Control Panels from the Apple menu and open the Memory control panel).



To set the size of the disk cache, click the up or down arrows next to the Cache Size box. The new size takes effect after you restart your Macintosh and remains in effect until you change it.



Arrows adjust cache in preset increments.

This button sets the disk cache at the system's preset amount (which depends on the RAM in your computer).

Depending on your Macintosh model, you also use the Memory control panel to adjust how virtual memory is used and to turn 32-bit addressing on or off (see "Using Hard Disk Space as Memory" and "Turning On 32-bit Addressing" in this chapter).

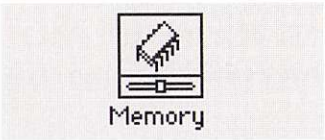
Using hard disk space as memory

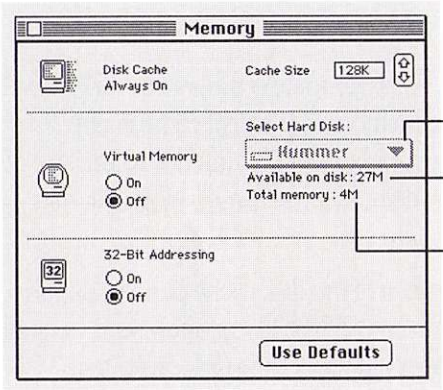
Some Macintosh models can use space on a hard disk to increase the computer's memory. The disk space, called *virtual memory,* is not available for storing information when it is being used for this purpose.

Your Macintosh should contain enough built-in memory for your regular needs—that is, for the programs you frequently have open simultaneously. You can use virtual memory when you want to open additional programs or to work with extremely large documents that can't be opened while using only the built-in memory.

Virtual memory is more effective when you are using several small programs simultaneously. It is less effective when using one very large program.

If your Macintosh can use virtual memory, you can adjust its use of virtual memory in the Memory control panel (choose Control Panels from the Apple menu and open the Memory control panel).





Pop-up menu of hard disks in use (dimmed when virtual memory is off)

Space available on the disk *Hummer*

Total memory (exclusively RAM in this example; includes virtual memory if it's on)

You also use the Memory control panel to adjust the size of the disk cache and (depending on your Macintosh model) to turn 32-bit addressing on or off (see "Adjusting the Disk Cache" and "Turning On 32-bit Addressing" in this chapter).

1. **Click the On button to turn on virtual memory.**

   The Select Hard Disk pop-up menu becomes active (black) when you click On.

2. **Press the pop-up menu to open it and drag to choose the hard disk on which space will be allocated for virtual memory.**

3. **Click the up and down arrows to adjust the amount of disk space to be used as virtual memory.**

   The Memory control panel is preset to allot the same amount of virtual memory as the amount of RAM installed in your Macintosh. Choosing a larger amount of virtual memory is likely to slow the computer's performance.

   It is recommended that you accept the preset size. The numbers for "Available on disk" and "After restart" change as you adjust the amount of disk space.

4. **Choose Restart from the Special menu.**

After you restart, your computer's total memory (as indicated in the window that appears when you choose About This Macintosh from the Apple menu) includes the virtual memory you set aside on the hard disk.

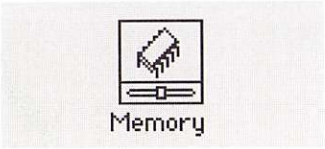
△ **Important:** When you turn on virtual memory, the system software creates a file named VM Storage in your System Folder (if the startup disk is used for virtual memory) or on the desktop (if another hard disk is used for virtual memory). This file is large—the size of the computer's RAM and the designated amount of virtual memory combined. For example, if your Macintosh has 4 MB of RAM and you add 2 MB of virtual memory, the VM Storage file will occupy 6 MB of space on your startup disk. △

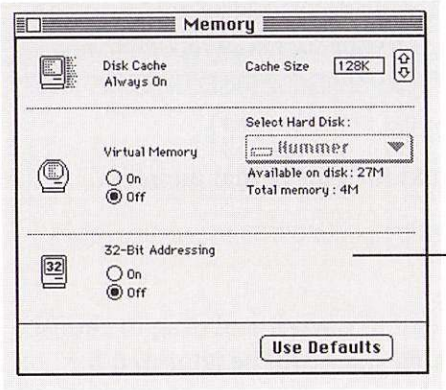
Turning on 32-bit addressing

Some Macintosh models can use very large amounts of memory (more than 8 megabytes) by taking advantage of a feature called 32-bit addressing—the use of very long (32-digit) binary numbers to control the way data is manipulated.

If your Macintosh can use 32-bit addressing, you can turn the feature on or off in the Memory control panel (choose Control Panels from the Apple menu and open the Memory control panel).

To turn 32-bit addressing on or off, click the appropriate buttons in the control panel, then choose Restart from the Special menu.





When you turn on 32-bit addressing, a status message appears here.

You also use the Memory control panel to adjust the size of the disk cache and (depending on your Macintosh model) to set aside hard disk space for use as memory (see "Adjusting the Disk Cache" and "Using Hard Disk Space as Memory" in this chapter).

Chapter 12

Printing

In this chapter

- Before you print
  - Choosing a printer
  - Selecting Page Setup options
  - Updating printer drivers on networked computers
- Printing your work
  - Printing the contents of a window
  - If the printer doesn't print your document
- Printing while using the computer for other work
- Working with fonts
  - Outline fonts and bitmapped fonts
  - Installing fonts
  - Removing fonts
  - Transferring fonts to a LaserWriter printer
  - Finding out about available fonts
  - Using the LaserWriter Font Utility

Before you print

Before you can print, your Macintosh must be connected to a printer, either directly or over a network. See the instructions that came with your printer if you need information about connecting it to your computer.

Then, you must tell your Macintosh which printer to use by *choosing* the printer.

Choosing a printer

You tell the Macintosh which printer to use by choosing the printer in a program called the Chooser. You don't need to choose a printer every time you print. You need to choose one only when you're using a printer for the first time and whenever you decide to change printers.

How you use the Chooser depends on whether your Macintosh is connected directly to the printer or connected to a network.

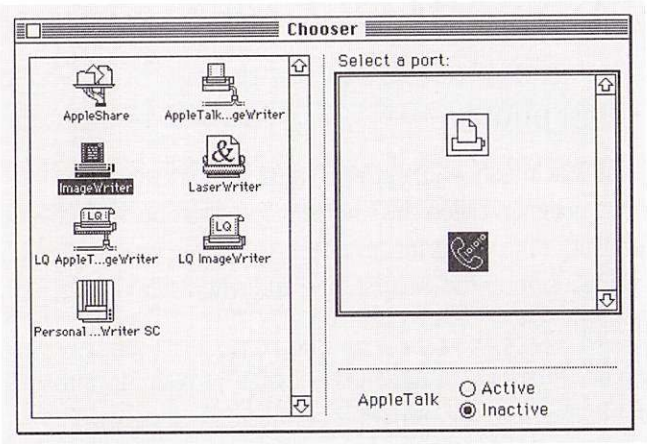
If your printer is not on a network

Make sure that you've connected the printer according to the instructions that came with it and that you know which port you used (on the back of the computer) to connect the printer.

1. **Choose the Chooser from the Apple menu.**

   The Chooser window appears.

2. **Click the icon of the printer you want to use. Make sure the icon is selected (highlighted).**



- *If your printer's icon does not appear in the Chooser,* then the appropriate printer driver—the program that communicates with, or "drives," the printer—has not been installed in your System Folder. Close the Chooser and install the driver you need. You can use the Customize option in the Installer program (see Chapter 8, "Setting Up Your Macintosh System"), or you can install the driver directly by dragging its icon into the System Folder. If your printer is not an Apple printer, review the instructions that came with it for information on installing its driver. ❖

If you have a Personal LaserWriter SC, close the Chooser window after you click the Personal LaserWriter SC icon.

3. **Click the icon representing the port that you used to connect the printer. Make sure the icon is selected.**

   You have only two choices: the printer port or the modem port. Click the icon that matches the icon of the port (on the back of the computer) to which you connected the printer cable.

4. **Click the Inactive button next to the word "AppleTalk."**

   If the Inactive wasn't already selected, a dialog box appears. Click OK.

5. **Close the Chooser window.**

If your printer is on a network

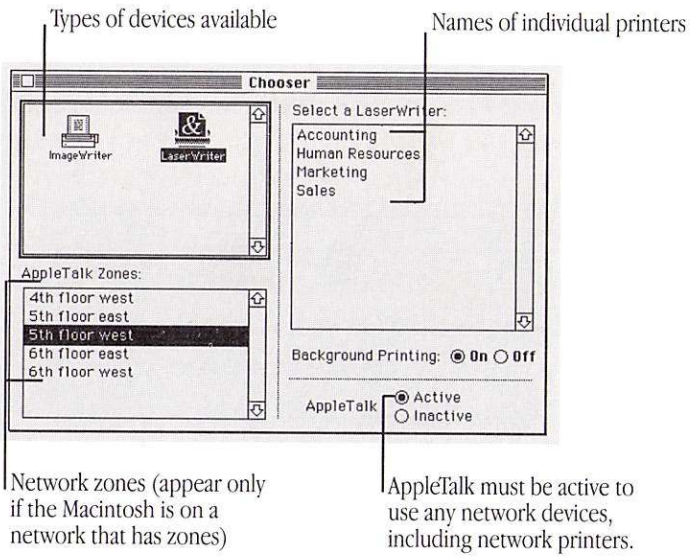
Find out from your network administrator (or the person who set up your computer) which printer you can use, which zone it's in (if your network has zones), and what its name is (every printer on a network has its own name).

1. **Choose the Chooser from the Apple menu.**

   The Chooser window appears.

2. **Click the Active button next to the word "AppleTalk."**

   If Active wasn't already selected, a dialog box appears. Click OK.



3. **Click the icon representing the type of printer you want to use.**

   You may have to click the up and down scroll arrows to find the icon.

❖ *If your printer's icon does not appear in the Chooser,* then the appropriate printer driver—the program that communicates with, or "drives," the printer—has not been installed in your System Folder. Close the Chooser and install the driver you need. You can use the Customize option in the Installer program (see Chapter 8, "Setting Up Your Macintosh System"), or you can install the driver directly by dragging its icon into the System Folder. (If you install the LaserWriter driver, be sure to install the PrintMonitor program also.) If your printer is not an Apple printer, review the instructions that came with it for information on installing its driver. ❖

4. **If you see a list of AppleTalk zones, click the zone where the printer is located.**

   You may have to click the up and down scroll arrows to find the zone. The zones are listed alphabetically.

5. **Click the name of the printer you want to use, even if it's the only one that appears.**

continues ▶

6. **If you want to be able to use your Macintosh for other work while it's printing documents, click the On button next to Background Printing.**

   The background printing option is available only if both the PrintMonitor program and the LaserWriter driver have been installed in your System Folder. (See "Printing While Using the Computer for Other Work" in this chapter for information about using PrintMonitor.)

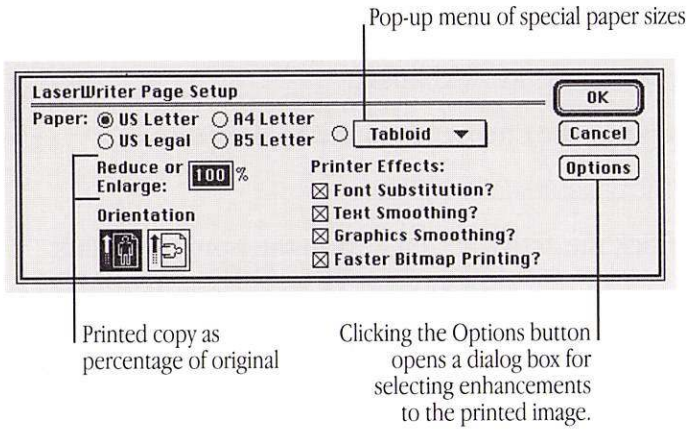
7. **Close the Chooser.**

Selecting Page Setup options

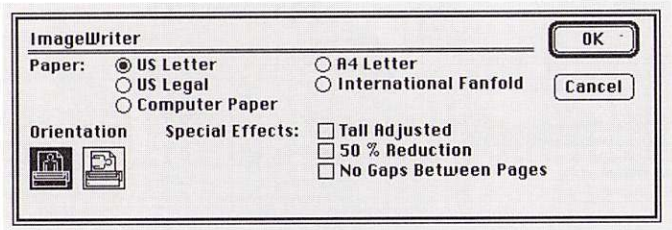
You use the Page Setup dialog box when you've selected a new printer in the Chooser or when you want to use a different paper size or printing option.

- Choose Page Setup from the File menu and select the options you want.

When a LaserWriter printer is chosen, this Page Setup dialog box appears:



When an ImageWriter printer is chosen, this Page Setup dialog box appears:



You can choose Show Balloons from the Help menu to get descriptions of the enhancements provided in the Options dialog box, or check your printer's manual for details.

You'll see different options for each type of printer you use. Some programs provide additional options. Options you set in the Page Setup dialog box remain in effect until you change them.

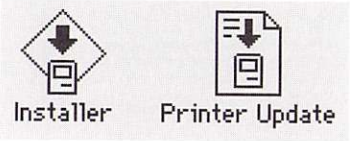
Updating printer drivers on networked computers

All computers on a network that share one or more printers must have the same version of the printer driver software that communicates with (or "drives") the printers. When someone on the network sends a document to the printer using a version of the printer driver that's different from the last version the printer recognized, the printer restarts itself (which takes time and clears any fonts from its temporary memory).

△ **Important:** All computers on a network must have the same version of printer drivers in their System Folders. △

If your Macintosh is part of a network, you or your network administrator should update the printer drivers on any Macintosh computers on your network that are running any system software version earlier than version 7.0. You do not have to update other components of the system software; version 7.0 printer drivers work with earlier versions of the system software.

To update printer driver software, you use the Installer program and the accompanying Printer Update document (both files are on one of the system software disks that came with your computer).



You can store these files on a file server or a shared disk on the network and install the update from there.

1. **Locate the Installer and Printer Update files (supplied on one of the system software disks), and then open the Installer icon.**

   A dialog box appears, showing the printer driver icons and explaining your installation options.

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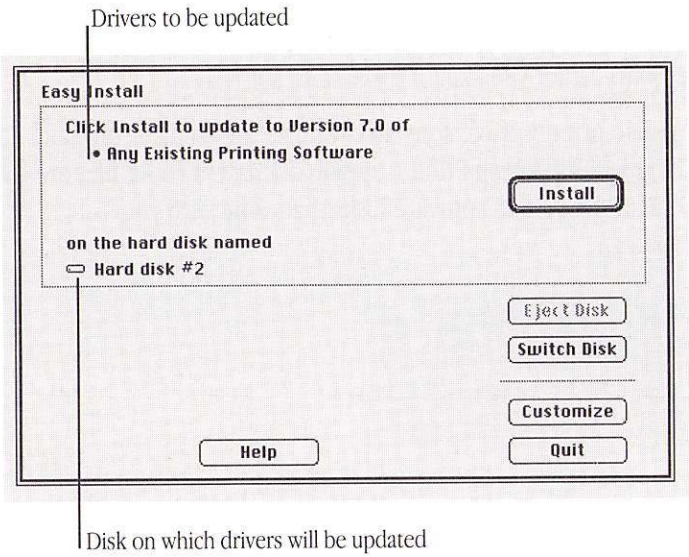
2. **Click OK.**

The Easy Install dialog box appears.

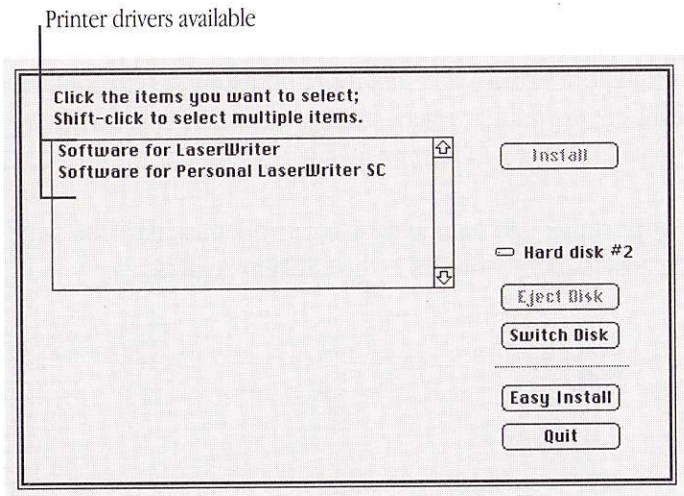


3. **Make sure that the hard disk indicated in the box is the one you want to update the printer drivers on. If a different disk name appears, click the Switch Disk button until the correct disk name appears.**

4. **If you want to install different printer drivers in addition to those already on your disk, click the Customize button, then click the names of the drivers you want to install.**

If you want to update only the drivers that are already installed on your disk, go to step 5.

When you click Customize, the custom installation dialog box appears, showing a list of the printer drivers available. Press the Shift key while you click if you want to select more than one printer driver.



5. **Click Install.**

6. **Click Quit when you see a dialog box reporting that installation was successful.**

   If a dialog box reports that installation was not successful, try the update again.

Printing your work

The most common way to print a document is while it's open and while its window is the active window. You can also print documents while the Finder is the active program.

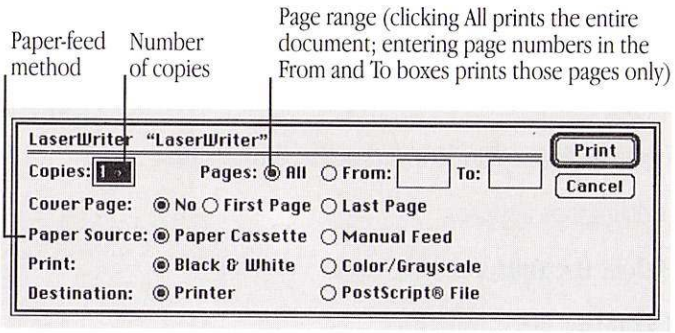
1. **Make sure that the document you want to print is in the active window.**

❖ *If you're printing from the Finder,* click the icon of the document you want to print (or click several document icons while holding down the Shift key). ❖

2. **Choose Print from the File menu, or press ⌘-P.**

   A dialog box appears, in which you can set printing options. The options vary depending on the printer you have chosen and the program in which the document was created.

   If a LaserWriter printer is chosen in the Chooser, this dialog box appears:



❖ *Printing color or gray-scale documents:* You can print color or gray-scale documents on any color printer that can use the LaserWriter driver. If you print a color document on a printer that prints only in black and white, the document will be produced in a halftone format; that is, it will be composed of patterns of dots. ❖

   Some programs offer additional printing options, such as the order in which a document's pages are printed. See the manuals that came with your programs for more information on their printing features.

3. **Click the Print button in the upper-right corner.**

   After a moment, a status box appears. If background printing is turned on in the Chooser, the status box disappears after a few seconds, and you can do other work while printing continues.

Printing the contents of a window

You can print the contents of the active window when you're working in the Finder.

1. **Make sure that the window whose contents you want to print is the active window.**
2. **Choose Print Window from the File menu.**

   A dialog box appears.
3. **Select the options you want.**
4. **Click the Print button.**

   The window's contents are printed in the format currently displayed, including items not visible on the screen.

When no window is active, you can print the contents of the Macintosh desktop by choosing Print Desktop from the File menu.

If the printer doesn't print your document

The Print command isn't reaching the printer, the printer is getting conflicting signals, or the printer isn't working properly.

- Check that the printer is turned on and warmed up (if it's a LaserWriter, it should have printed a sample page).
- Check the cable connections to the printer.
- If your printer is an ImageWriter, make sure that the Select light is on. (Press the Select button to turn the light on.) A dialog box on the screen may inform you that the printer is not responding.
- Check that the printer (and its name, if it's a LaserWriter) is selected in the Chooser.
- Make sure that you are using the same version of the printer driver as all other people on your network.
- If an error message states that the printer could not print your document, turn off the printer for at least 10 seconds, then turn it on again and wait for the printer to warm up before trying to print again.

Printing while using the computer for other work

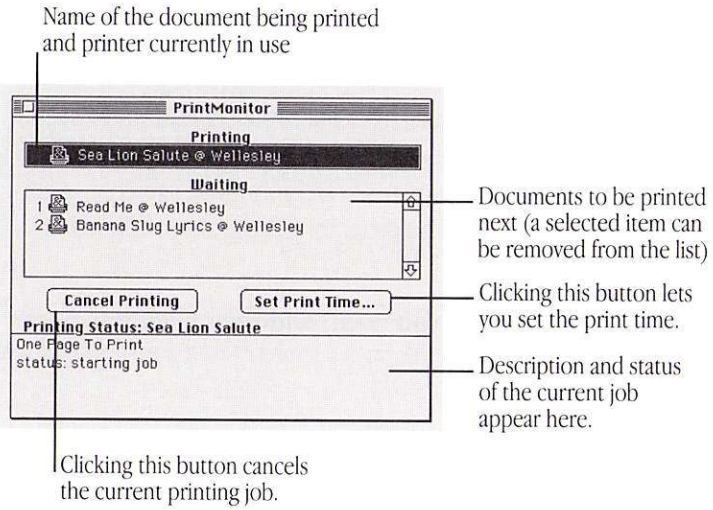
You can use your Macintosh for other work while you're printing on a LaserWriter printer if the background printing option is turned on in the Chooser. (See "Choosing a Printer" in this chapter for information about turning on background printing.)

You can control background printing with PrintMonitor, a program that's installed automatically when you install system software using the Installer program's Easy Install option.

1. **After you have started printing a document, choose PrintMonitor from the Application menu.**

   When background printing begins, PrintMonitor opens automatically and its name appears in the Application menu at the right end of the menu bar.

   When you choose its name from the Application menu, the PrintMonitor window appears.



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REFERENCE

You can use PrintMonitor to

- monitor the status of printing
- cancel a document currently printing or waiting to print
- set the time you want a document to print (date and hour) or postpone a job indefinitely
- monitor paper supply (PrintMonitor's icon blinks at the right end of the menu bar when the printer is out of paper; you can change the notification method with the program's Preferences command in the File menu.)
- signal when to feed paper manually (PrintMonitor's icon blinks at the right end of the menu bar to signal that you must confirm the manual operation; you can change this notification with the program's Preferences command in the File menu.)

2. **Select the options you want, and then click the close box.**

Working with fonts

A *font* is a collection of letters, numbers, and symbols in a distinctive typographic design.

When you install Macintosh system software, several fonts are installed in the System file, which is in the System Folder on your startup disk. You can install additional fonts and remove fonts.

Additional fonts are supplied on one of the system software disks. Fonts are also available from independent manufacturers, user groups, and computer bulletin board services.

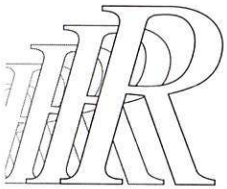
Outline fonts and bitmapped fonts

Your Macintosh uses two types of fonts:

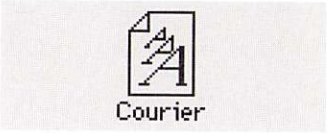
- outline fonts
- bitmapped fonts

Both types of fonts are installed in the System file in the System Folder of your startup disk when you install system software.

Outline fonts (also called scalable or variable-size fonts) describe each letter, number, or symbol as a mathematical formula that defines the character's shape and adjusts itself to make the character's size larger or smaller. Your Macintosh, therefore, needs only a single outline font in a particular typeface (such as Times) to be able to print or display that typeface in different sizes.

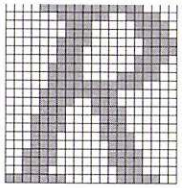


The outline fonts supplied with Macintosh system software are called TrueType fonts.



❖ *When your Macintosh is running System 6,* you cannot use TrueType fonts supplied with System 7. ❖

Bitmapped fonts (also called fixed-size fonts), on the other hand, describe each character as a grid of black and white dots (called a bit map), which is a rendering of the character's shape in a specific size.



Your Macintosh needs a separate bitmapped font of a typeface in each size it prints or displays, such as 12-point Times® or 10-point Helvetica®.

An outline font character is like a cookie recipe that you can use to make as big or as small a batch of cookies as you need. A bitmapped font character is like a cookie cutter: it gives you one size—that's all.

For information on how the system software finds the fonts it needs, see "Getting the Best-Looking Fonts" in Chapter 16, "Tips and Troubleshooting."

Installing fonts

To install a font:

1. **Quit all programs that are open.**

   Pull down the Application menu to make sure that the Finder is the only open program. Choose any other open program from the Application menu and then choose Quit from the File menu.

2. **Locate the icon of the font you want to install and drag it to the System Folder icon (not the System Folder window) on your startup disk.**

   You can click multiple font icons while holding down the Shift key to select more than one icon.

   A dialog box appears, letting you know that the fonts will be stored in the System file, where they belong.

3. **Click OK.**

Removing fonts

To remove a font:

1. **Open the System Folder on your startup disk.**
2. **Locate the System file icon and open it.**
3. **Locate the icon of the font you want to remove and drag it out of the System window and out of the System Folder window.**
4. **Close the System window and the System Folder window.**

Transferring fonts to a LaserWriter printer

If you're using a LaserWriter printer that's equipped to handle PostScript® and you want to print using PostScript outline fonts that are not built into your printer, you can transfer, or download, outline fonts from your System Folder to the printer. (PostScript is a programming language that describes the characters, symbols, and images appearing on each page of a document.) Downloading fonts saves you printing time if you plan to print a batch of documents that use those fonts.

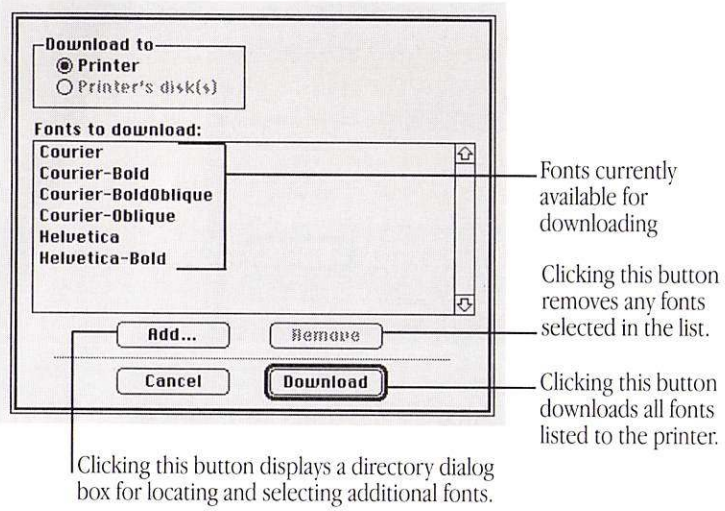
When you download a font, it's stored in the printer's memory or on a hard disk attached to the printer. You can download as many outline fonts as the printer's memory and hard disk space allow.

You download a font using the LaserWriter Font Utility, which is supplied on the system software disks.

1. Locate and open the LaserWriter Font Utility icon.

2. Choose Download Fonts from the File menu.

A dialog box appears.



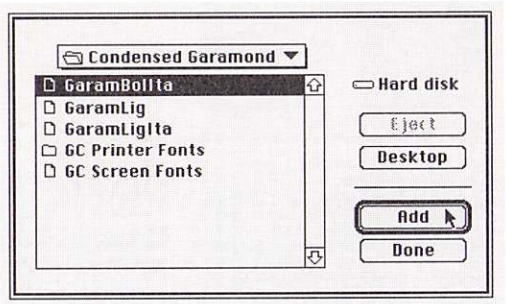
3. If the font you want to download is not listed, click the Add button to add fonts to the list.

A directory dialog box appears, which you use to locate the fonts you want.

continues ▶

4. **Click the name of the font you want, then click Add.**

   You can press the Shift key while you click to select more than one font.



5. **When you've added all the fonts you want to download, click Done.**

   The directory dialog box closes and the fonts you added are listed in the Font Utility dialog box.

6. **Click the Download button to send all the fonts in the list to the printer or its hard disk.**

   A status box appears. You can click Cancel to stop the process.

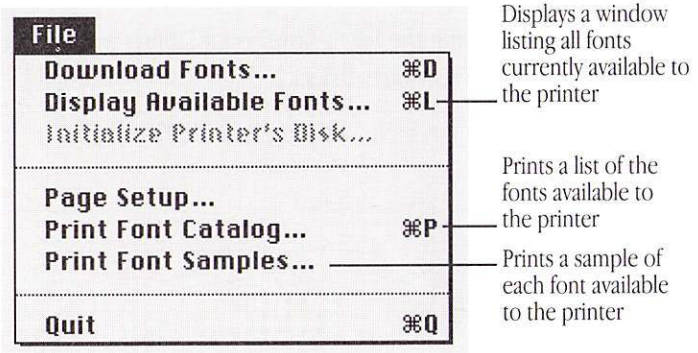
7. **Click OK when the status box reports the results of downloading.**

8. **Choose Quit from the File menu.**

Finding out about available fonts

Most application programs have a Font menu that lists the fonts installed in your System file, though some programs do not list them all (you can open the System file icon, inside the System Folder, to see all the fonts stored there).

The LaserWriter Font Utility program (supplied on the system software disks) provides three ways to see the fonts available for printing on a LaserWriter. You can display a list of fonts on the screen, print a catalog of fonts, or print a set of font samples. You choose the method you want from the LaserWriter Font Utility's File menu.



Using the LaserWriter Font Utility

While the LaserWriter Font Utility is most useful for transferring (or downloading) fonts from your System Folder to a LaserWriter printer and finding out about available fonts, you can also use the program to

- initialize a hard disk attached to a printer
- control whether a printer prints a sample page when you turn it on
- restart a printer
- send PostScript files to a printer

The LaserWriter Font Utility program is supplied on the system software disks.

Initializing a hard disk attached to a printer

Some printers let you attach a hard disk so you can store fonts on it (in addition to the fonts stored in the printer's memory). See the manuals that came with your printer if you need information about connecting a hard disk.

1. **Open the LaserWriter Font Utility icon.**
2. **Choose Initialize Printer's Disk from the File menu.**

   A dialog box appears.

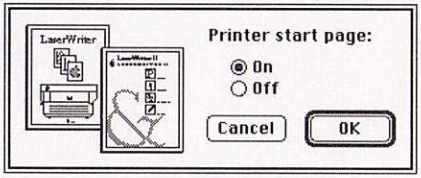
3. **Click the box next to the SCSI ID number of the hard disk that you want to initialize so that an X appears in the box.**
4. **Click the Initialize button.**

Turning the printer's sample page on or off

The LaserWriter prints a sample page each time it is turned on or restarted.

1. **Open the LaserWriter Font Utility icon.**
2. **Choose Start Page Options from the Utilities menu.**

   A dialog box appears.



3. **Click the On or Off button.**
4. **Click OK.**

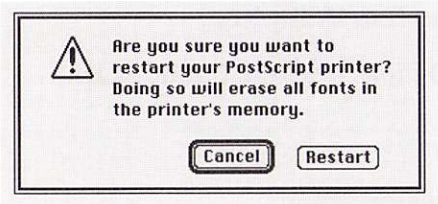
REFERENCE

Restarting a LaserWriter printer

Restarting the printer clears its memory, removing the fonts stored there and making room for other fonts that you may want to transfer to the printer.

1. **Open the LaserWriter Font Utility icon.**
2. **Choose Restart Printer from the Utilities menu.**

   A dialog box appears.



3. **Click Restart.**

Transferring a PostScript file to a LaserWriter

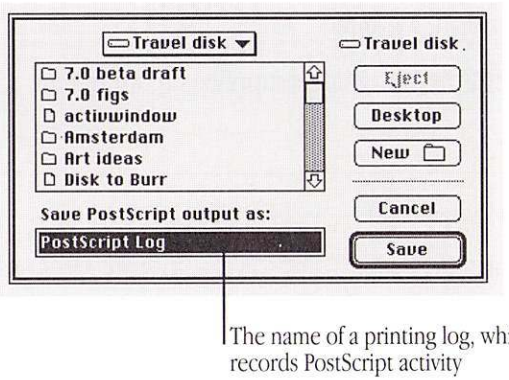
You can use the LaserWriter Font Utility to send a file in PostScript format to a LaserWriter. (PostScript is a programming language that describes the characters, symbols, and images in a file to be printed or displayed.)

1. **Open the LaserWriter Font Utility icon.**
2. **Choose Download PostScript File from the Utilities menu.**

   A dialog box appears.

3. **Click the name of the file you want to download to the printer, and then click Open (or double-click the name).**

   A second dialog box appears, asking you to name a file that saves a record of the PostScript activity. This file has the preset name "PostScript Log."



4. **Type a name for the printing log, then click Save.**

   The file is sent to the printer and a record of the PostScript activity is saved in the printing log.

   You can open the printing log to see the sequence of PostScript commands when the file was sent.

Chapter 13

Using Your Macintosh on a Network

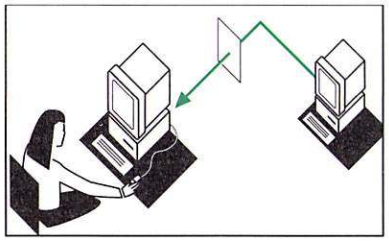
In this chapter

- What you can do on the network
- Setting up your Macintosh on a network
  - Connecting to a network
  - Configuring your Macintosh for a network
- Gaining access to files on other computers
  - Before you begin
  - Connecting to a shared disk
  - Disconnecting from a shared disk
  - Using an alias to connect quickly to a shared disk
  - Connecting automatically when you start up
- Working with files and folders on other computers
  - Creating a new folder on another computer
  - Giving folder ownership to someone else
- Sharing your files over the network
  - How file sharing works
  - Turning file sharing on
  - Selecting a folder or disk to share
  - Naming the people who'll have access to shared files
  - Selecting a user or group to share a folder or disk
  - Giving away ownership of a folder or disk on your computer
  - Turning file sharing off
  - Monitoring file-sharing activity
  - Gaining access to your computer when you're away from it
- Using access privileges
  - Understanding access privileges
  - Setting access privileges to folders and disks
- Linking programs over the network
  - Linking to a program on another computer
  - Allowing other people to link to your programs
- Using communications products with System 7
  - Using the Communications Toolbox
  - Using Data Access Language

What you can do on the network

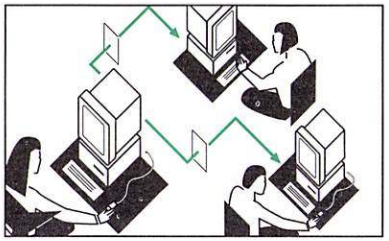
You can do several things with your Macintosh once it is connected to a network:

- Gain access to information on other computers.



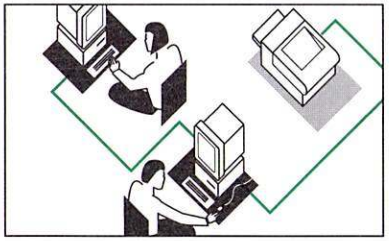
Working at your own computer, you can connect to other computers and gain access to files that are stored there.

- Allow access to information on your own computer.



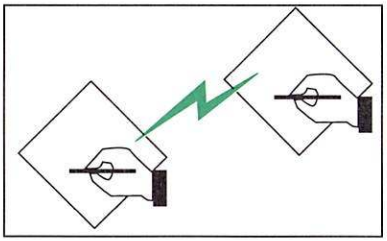
You can designate the contents of specific folders and hard disks on your computer as "shared files" that other people can gain access to over the network.

- Print documents on network printers.



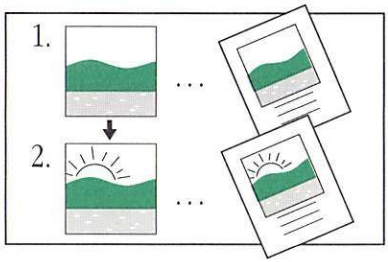
You can print documents on network printers as you would on printers that are connected directly to your computer.

- Link programs to programs on other computers.



You can link your programs to programs on other computers in order to share features between those programs. For example, you could link a word-processing program to a dictionary program to check the meaning and spelling of the words in a document.

- Update files over the network automatically.



You can automatically update documents created in programs that use the Macintosh system software's publish-and-subscribe feature (see the documentation that came with your programs for information about this feature).

Setting up your Macintosh on a network

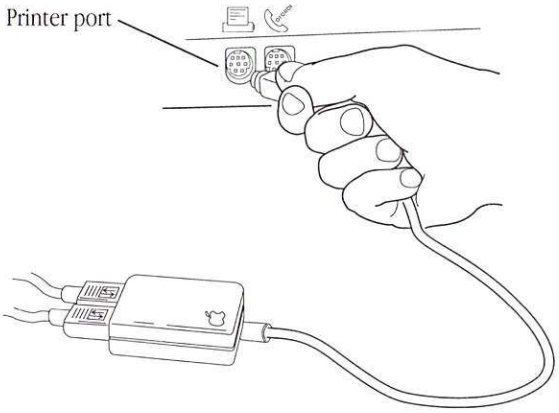
Before you can use your Macintosh on a network, you have to physically connect your computer to the network, install networking software, make sure that your computer can communicate with the network, and identify your computer and yourself to others on the network.

If you have a network administrator, he or she may have already set up your Macintosh on the network. Before you proceed, ask your network administrator whether these tasks have been completed.

Connecting to a network

Your Macintosh has built-in AppleTalk networking software that allows your computer to connect to a network quickly and easily.

If you're using a LocalTalk network (a type of AppleTalk network), then all of the software and hardware you need is already built into your Macintosh. You can connect your computer to the network by plugging LocalTalk-compatible cables into the back of your computer. (See the documentation that came with your cables if you need more information.)



REFERENCE

If you're using an Ethernet or a Token Ring network, your Macintosh needs both an EtherTalk or a TokenTalk expansion card installed in one of its expansion slots and the appropriate software to communicate with the network. (See the documentation that came with your expansion card if you need more information.)

The EtherTalk and the TokenTalk software are provided on the system software disks that came with your computer. If a network expansion card was already installed in your computer when you installed system software, the software for it was installed automatically. If you installed the expansion card *after* you installed the system software, you need to install the network software separately (see "Installing a Customized System" in Chapter 8, "Setting Up Your Macintosh System").

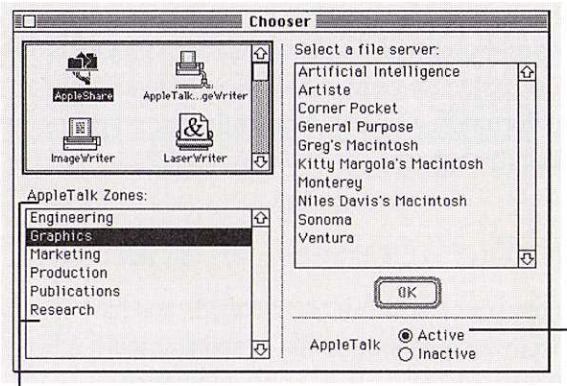
Configuring your Macintosh for a network

Before you can use the networking features of your Macintosh, you have to take a few steps to prepare it.

Making sure AppleTalk is on

The first time you turn on your computer after you have connected it to a network, AppleTalk—your computer's built-in networking software—is turned on automatically. But if you have turned AppleTalk off—for example, to connect an ImageWriter printer to your printer port—you need to turn it back on again.

1. **Choose the Chooser from the Apple menu.**



This list appears only if your network has zones.

AppleTalk must be active for your Macintosh to use a network.

2. **Click the Active button (in the lower-right corner of the Chooser) to turn on AppleTalk.**

3. **Close the Chooser.**

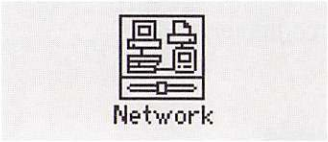
   AppleTalk remains on until you turn it off in the Chooser.

Selecting a network connection

If you're using a LocalTalk network, go to the next section, "Naming Your Macintosh and Its Owner."

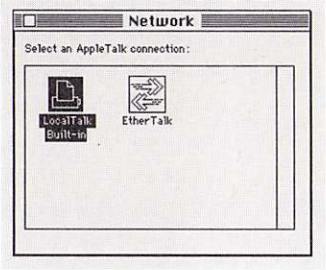
If you want to use an EtherTalk or a TokenTalk network connection type or switch between two or more types of network connections, you have to select which connection you want in the Network control panel.

1. **Choose Control Panels from the Apple menu and double-click the Network icon to open it.**



❖ *If you can't find the Network control panel:* The Network control panel, EtherTalk software, and TokenTalk software were installed only if you already had an EtherTalk or a TokenTalk expansion card in your computer when you installed the system software. If you have an expansion card installed now and no Network control panel appears in the Control Panels folder, use the Installer program to install EtherTalk or TokenTalk software. (See "Installing a Customized System" in Chapter 8.) ❖

2. **Click the icon of the network connection you want to use.**



A dialog box warns you that you may be disconnected from any network services (such as printers or file servers) that you are using with your current network connection. This means that you must reconnect to the network services on the new network.

3. **Click OK.**

Next, you need to select the network *zone* your computer will use.

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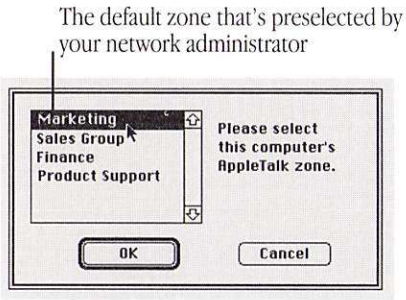
4. **Double-click the icon of the network connection you chose in step 2.**



5. **Click the name of the zone you want to use.**

   Zones are set up by a network administrator and are used to distribute the devices on a network among groups for easier access.

6. **Click OK.**

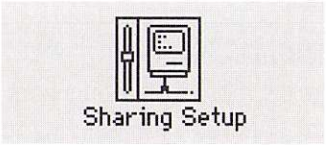
7. **Close the Network control panel.**

   You can now use the network connection you selected.

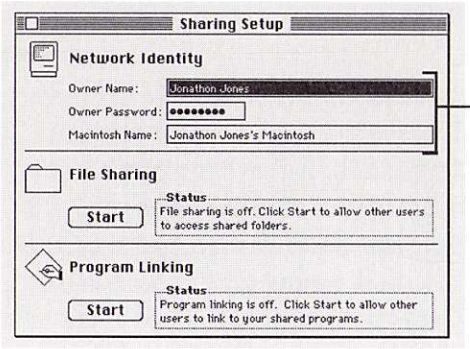
Naming your Macintosh and its owner

Before you begin to use the network, you must give your Macintosh a name and name yourself as its owner. The name you give your Macintosh appears in the Chooser of other computers on the network so that people on the network can gain access to files on your computer.

1. **Choose Control Panels from the Apple menu and double-click the Sharing Setup icon to open it.**



❖ *If you can't find or can't open the Sharing Setup icon:* Make sure that the Sharing Setup icon is in the Control Panels folder, and that the File Sharing Extension file and the Network Extension file are in the Extensions folder inside the System Folder. Then restart your computer. ❖



2. **Type a name in the box labeled Owner Name and press Tab.**

   Type the name of the primary user of this computer—very likely, this is you.

3. **Type your password in the box labeled Owner Password and press Tab.**

   Your password can be up to eight characters in length. Your password prevents others from gaining access to your files without your permission. After you type your password and press Tab, it is replaced by bullets (•) to help keep your password private.

4. **Type a name for your Macintosh in the box labeled Macintosh Name.**

   If a name already appears in the Macintosh Name box, you can use that name or type in a new one.

5. **Close the Sharing Setup control panel.**

   Your computer is now ready to be used on a network.

Gaining access to files on other computers

When your computer is connected to a network, you can retrieve and store information on other computers, including a *file server* —usually a computer on the network with special software that allows you to access it, store files on it, or retrieve files from it.

Files on a file server are stored on *shared disks*—hard disks or CD-ROM discs that can be accessed over the network. Private Macintosh computers (not file servers) on your network might also have shared disks if they are running system software version 7 and if they are using *file sharing*—the ability to share information on a private Macintosh. (See "Sharing Your Files Over the Network" in this chapter.)

Before you begin

Before you attempt to retrieve or store information on the network, do the following:

- **Find out the name of the shared disk you want to access and the name of the file server or private Macintosh that it's on.**

  Ask your network administrator for the name of a file server; ask the owner of a private Macintosh for its name.

- **If your network has zones, find out the name of the zone the other computer is in.**

- **Find out if you are registered on the computer or if it allows guest access.**

  A Macintosh owner or network administrator can limit access to files on a shared disk. Ask the Macintosh owner or your network administrator how much access you have to the files.

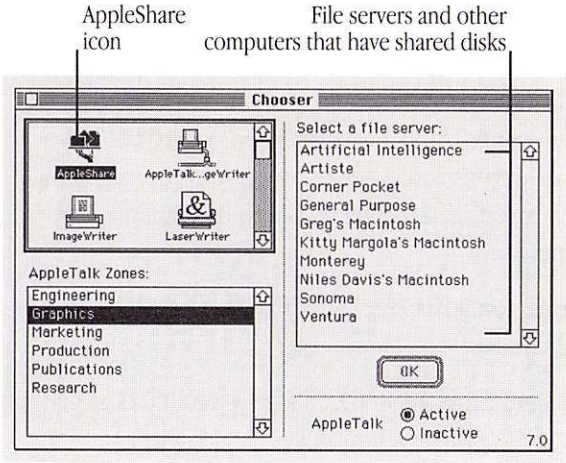
- **If you're allowed access as a registered user, ask the Macintosh owner or your network administrator for your user name and your password.**

  Find out exactly how your name and your password are spelled, including the use of capital and lowercase letters in your password.

Connecting to a shared disk

1. **Choose the Chooser from the Apple menu.**

   The Chooser opens.



2. **Make sure that AppleTalk is active.**

3. **Click the AppleShare icon in the upper-left section of the Chooser window.**

❖ *If the AppleShare icon does not appear:* Make sure that the AppleShare file is in the Extensions folder in your System Folder. ❖

4. **If your network has zones, click the zone in which the computer with the shared disk you want resides.**

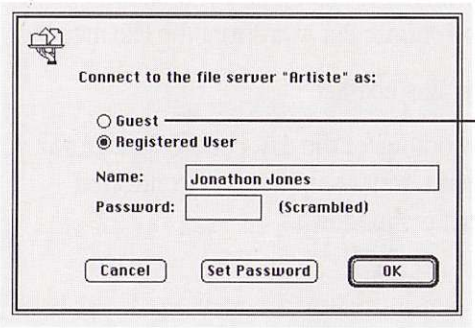
   If you do not see a box in your Chooser labeled AppleTalk Zones, skip this step.

5. **Click the name of the computer with the shared disk that you want to use.**

❖ *If the name you want isn't listed:* Make sure that you have selected the correct zone. If the zone is correct, ask your network administrator or the Macintosh owner if the computer is turned on. You cannot connect to a computer that's turned off. ❖

6. **Click OK.**

   A dialog box appears for you to identify yourself as a registered user or guest.



Click here if you are not registered on the computer you're connecting to.

7. **Click Guest or Registered User.**

   If you are a guest or if you are not certain that you are registered, click Guest and go to step 10. If you are a registered user, click Registered User.

   If the Guest option is dimmed, guests are not permitted access to this computer.

8. **If you are a registered user, make sure your user name is displayed in the box exactly as it is registered.**

   Any name that appears in the box is taken from the Owner Name in the Sharing Setup control panel on your computer. If that name is different from your registered user name on the computer you're connecting to (or if no name appears in the box), type your registered user name now.

9. **Type your password.**

   Type your password exactly as it is registered. Capital and lowercase letters must match.

❖ *If your password is not accepted:* Make sure that you haven't made any typographical errors. Check that your Caps Lock key has not been pressed inadvertently. ❖

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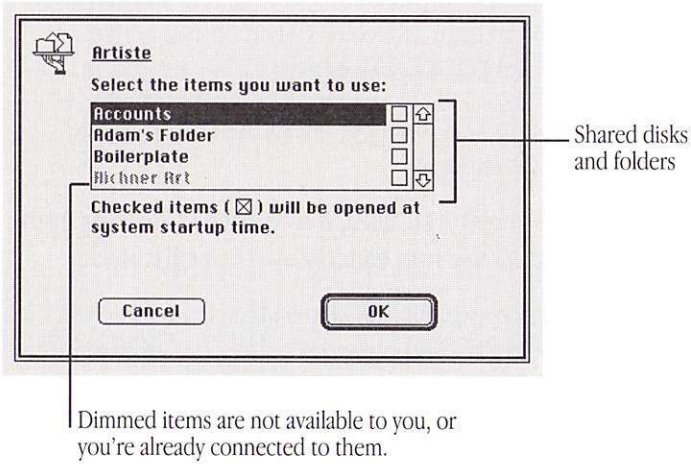
10. Click OK.

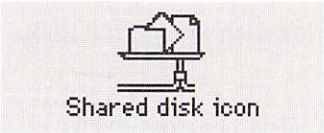


11. Select the shared disk you want to use by clicking its name.

A dimmed name indicates either that you are already connected to that shared disk, or that you don't have access to it. If a folder or disk you want does not appear, then you don't have access to it.

12. Click OK.

When you click OK, the dialog box closes and the icon of the shared disk appears on the right side of your desktop.



13. Close the Chooser.

Disconnecting from a shared disk

When you're finished using a shared disk, you can disconnect from it in three ways (after you've closed any open files or programs on the shared disk):

- Click to select the icon of the shared disk you want to disconnect from and choose Put Away from the File menu.
- Drag the icon to the Wastebasket.
- If you are finished working for the day, choose Shut Down from the Special menu. Your computer is disconnected automatically when it is shut down.

Using an alias to connect quickly to a shared disk

You can connect to a shared disk quickly by using aliases.

1. **Connect to a shared disk.**
2. **Click to select the shared disk icon.**
3. **Choose Make Alias from the File menu.**

   An alias icon appears that has the same name as the shared disk with the word *alias* appended to it. The name is selected for editing.

4. **If you wish, rename the alias, then drag it to a convenient place on your desktop or disk.**
5. **The next time you want to connect to the shared disk, open the alias you created in step 3.**

   If you originally connected to the shared disk as a registered user, a dialog box appears. Type your password.

   If you connected as a guest, this dialog box does not appear.

   The shared disk icon appears on your desktop.

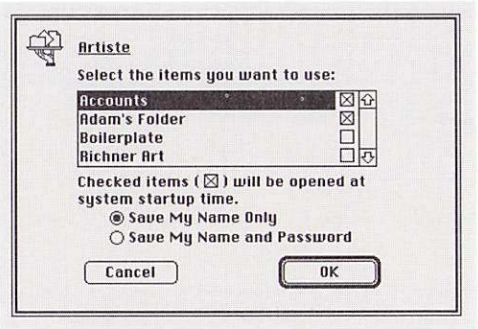
Connecting automatically when you start up

You can set up your computer to connect automatically to shared disks whenever you turn it on.

1. **Connect to a computer with the shared disk you want.**

   You see the dialog box containing a list of shared disks.

2. **Click the checkbox next to the name of a shared disk that you want to connect to automatically.**



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3. **If you're connecting as a registered user, click the button that indicates whether you want the shared disk to save your name only or both your name and your password.**

   If you select Save My Name Only, you'll have to type your password when you start up your computer. Click this option if you want to prevent unauthorized people from gaining access to the shared disk from your computer.

   If you click Save My Name and Password, your Macintosh will automatically connect to the shared disk when it starts up.

4. **Click OK.**

5. **Close the Chooser.**

Working with files and folders on other computers

Once you are connected to a shared disk, you can use the files and folders on it as you would the files and folders on your own computer. For example, you can

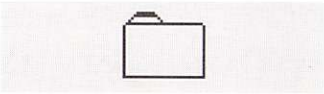
- double-click a folder on the shared disk to open it
- copy a file to or from the shared disk by dragging the file icon to where you want the copy

In some cases, you are not able to open certain items on a shared disk because the owner of the computer that has the shared disk has restricted *access privileges* to them. Access privileges determine whether you can see, open, or modify a file or a folder on a shared disk. To find out how to check your access privileges, see "Working With Privileges That Others Have Set" in this chapter.

Creating a new folder on another computer

You can create a new folder on shared disks on other computers (as long as you have the necessary access privileges). If you are connected to a computer as a registered user, you become the *owner* of any folder that you create on that computer. If you are connected as a guest, you share ownership of a folder you create with all guests and registered users. To learn about the access privileges you need to create a folder, see "Understanding Access Privileges" in this chapter.

The icons of folders that you own have a darkened tab.

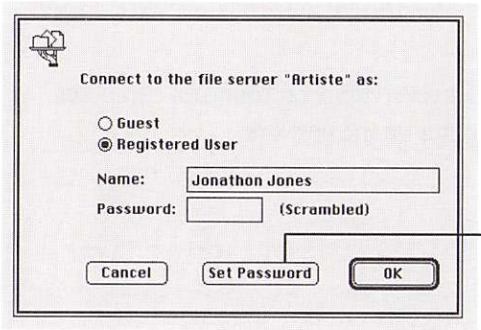


When you own a folder, you can set its *access privileges* to determine who can use it and in what way. See "Using Access Privileges" in this chapter for more information.

Changing your password

1. **Connect to the computer with the shared disk you want.**

   A dialog box appears in which you identify yourself as a registered user or guest.

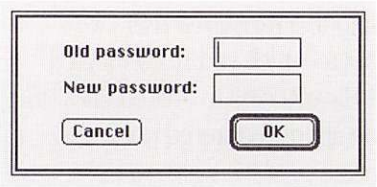


Click here to change your password.

2. **Click the Set Password button.**

   A dialog box appears.

   If a warning box tells you that you cannot change your password, your network administrator has prevented you from being able to do so.



3. **Type your current password. Then press Tab and type a new password.**

   A bullet (•) appears for each letter you type. Use a password that will not be easily guessed by someone else.

4. **Click OK.**

   A dialog box asks you to retype your new password to verify it. Click OK.

5. **Retype your password and click OK.**

   Your new password is now in effect.

REFERENCE

Giving folder ownership to someone else

You can give away the ownership of any folder that you own. Once you do so, the new owner controls access to the folder and can restrict your access to it. Make sure that you have moved any files you may need to another folder that you own before you give up ownership.

You can only give folder ownership to a *registered user* or *registered group* on the computer to which you're connected. (See "Naming the People Who'll Have Access to Shared Files" in this chapter for more information about registered users and registered groups.)

1. **Connect to a shared disk.**
2. **Click to select a folder that you own.**
3. **Choose Sharing from the File menu.**
4. **In the box labeled Owner, type the name of the registered user or group that you want to give folder ownership to.**

   Type the name exactly as your network administrator or the Macintosh owner has registered it.
5. **Close the dialog box.**

   Another dialog box asks you to confirm that you want to change the owner of the folder.
6. **Click OK.**

   The user or group that you named assumes ownership immediately.

Sharing your files over the network

You can let other people on the network gain access to files stored on your Macintosh. For example, if you've written a report that you'd like people in your work group to read, you can let them connect to your computer and open the file from their own computers.

You can always control what information you share and whom you share it with:

- You can share as much or as little as you like.
- You can specify who can use the information on your computer—one person, a group of people, or everyone on the network.
- You can gain access to everything on your own computer from another computer on the network.

How file sharing works

Sharing files on your computer consists of a few discrete steps that allow you to control exactly how you want to share information on your computer. This section provides an overview of these steps. For detailed instructions, continue on to subsequent sections.

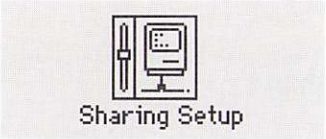
- First, you turn on the file-sharing capability of your Macintosh.
- Second, you allow others to gain access to the files in designated folders or disks (you "share" those files).

  Anyone on the network can gain access to the folders and disks you've shared. If you want to share certain files with only certain people, you continue with the following steps:
- Third, you name the people (the *registered users*) whom you'll allow to gain access to shared files on your computer.
- Fourth, for each shared folder or disk, you pick from your list of registered users the people whom you want to have access to the folder or disk.
- Fifth, you prevent anyone else from being able to gain access to the shared folder or disk.

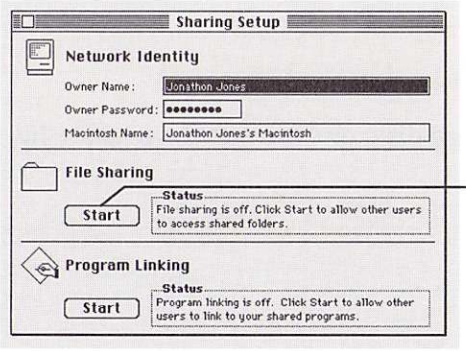
Turning file sharing on

Before you turn file sharing on, make sure that you have named your Macintosh as described in "Naming Your Macintosh and Its Owner" earlier in this chapter.

1. Choose Control Panels from the Apple menu and double-click the Sharing Setup icon to open it.



The Sharing Setup control panel opens.



Click here to start file sharing.

continues ▶

REFERENCE

2. **In the section labeled File Sharing, click the Start button.**

   When file sharing is turned on, the button is labeled Stop.

3. **Close the Sharing Setup control panel and the Control Panels folder.**

   File sharing is now turned on. You still need to select a specific folder or disk to share over the network.

Selecting a folder or disk to share

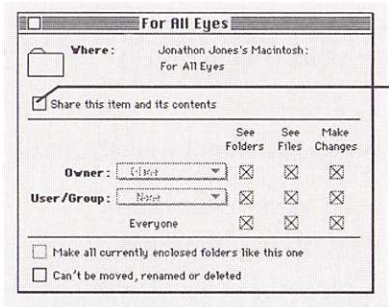
You can share any folder or disk on your computer—including hard disks and CD-ROM discs (but not floppy disks). You can share up to ten folders or disks at one time. (This number does not include the folders that are within the folders or disks that you share.)

1. **Make sure file sharing is turned on.**

2. **Select a folder, hard disk, or CD-ROM disc to share by clicking its icon.**

3. **Choose Sharing from the File menu.**

   A window appears.



Click here to share the item you've selected.

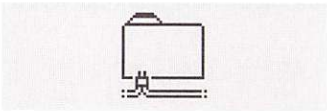
4. **Click the box labeled "Share this item and its contents" to place an X in it.**

   To find out more about the *access privileges* checkboxes—the ones in the columns labeled See Folders, See Files, and Make Changes—see "Using Access Privileges" later in this chapter.

5. **Close the window and click Save in the dialog box to save your changes.**

   The folder or disk you shared is now considered a *shared folder* or *shared disk.* Anyone on the network can gain access to it—and the files and folders inside it—over the network.

If you shared a folder, its icon appears on your desktop with a darkened tab and network cables connected to it.



6. **Drag any files and folders that you want to make available to the network into your new shared folder or disk.**

   The files and folders that you place in the shared folder or disk become available to the users who connect to your computer.

   When people on your network are connected to a shared folder, the icon of the folder on your desktop appears with faces in the center to indicate that it is in use.

△ **Important:** Copyright laws apply to sharing programs over a network as well as to copying programs from a floppy disk. Before you put programs inside shared folders or disks, check with any applicable licensing agreements and follow their specifications. △

Making a shared folder or disk private

To make a shared folder or disk private again, click to select the shared disk icon, choose Sharing from the file menu, and click the "Share this item and its contents" checkbox to remove the X. After you close the window, the folder or disk and any files or folders inside it cannot be accessed from the network.

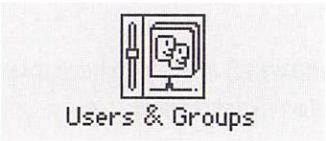
Naming the people who'll have access to shared files

You can share a folder or disk only with specific people on the network. To do so, you first have to name those people as registered users or as belonging to a registered group, and then you have to designate a shared folder or disk as being accessible to a specific registered user or registered group.

Naming a registered user

You can register as many as 100 users and groups of users combined, but the network's performance may suffer if you name more than 50.

1. **Choose Control Panels from the Apple menu and double-click the Users & Groups icon to open it.**



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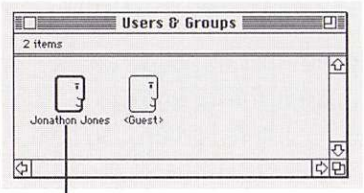
The Users and Groups control panel appears. It contains at least two icons. One (outlined in bold) represents you as the owner and primary user of your Macintosh.

The other icon is the <Guest> icon. You use this icon to allow or disallow guests to gain access to the shared files on your computer. (Guest access is automatically allowed when you first turn on file sharing.)



You type this name in the Sharing Setup control panel.

❖ *If you don't see the bold icon:* You haven't named your Macintosh and named yourself as its owner. See "Naming Your Macintosh and Its Owner" earlier in this chapter for instructions. ❖

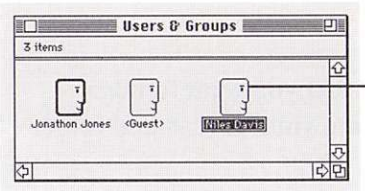
2. **Choose New User from the File menu.**

An icon labeled New User appears. Its name is selected for editing.

❖ *If you can't find the New User command,* click anywhere in the Users & Groups control panel to make it active. ❖

3. **Type the name of a person on the network whom you want to make a registered user of your computer.**

Make sure that you tell the person exactly how you registered him or her as a user.



New user icon

As a registered user, that person has access to any folders or disks you decide to share.

4. **To register more users, repeat steps 2 and 3.**

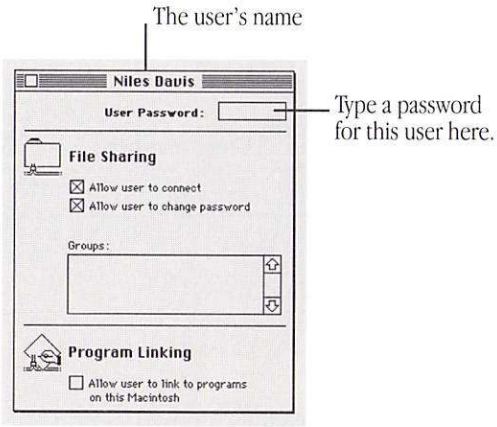
To give your users passwords or to name groups of users, continue with the next two sections. If you want to start sharing folders or disks with your users immediately, go to "Selecting a User or Group to Share a Folder or Disk" in this chapter.

Setting a user's password

You can assign passwords for your registered users to help verify their identities when they want to gain access to your computer.

1. **Open a user icon in the Users & Groups control panel.**

   A window with the name of the user appears.



2. **Type a password in the box labeled User Password, then press the Tab key.**

   The password can be up to eight characters long. When you finish typing the password and press Tab, each character of the password is replaced by a bullet to help keep that password private.

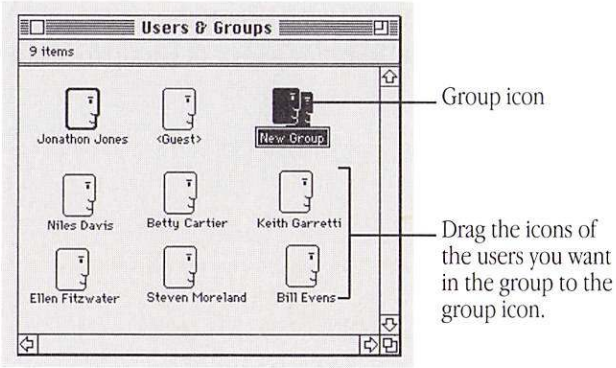
3. **Close the window and click Save in the dialog box that appears.**

Naming a group of users

You can name a group of registered users as a *registered group* and share a folder or disk with the members of that group.

1. **Open the Users & Groups control panel and choose New Group from the File menu.**

   An icon labeled New Group appears. The name is selected for editing.



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REFERENCE

2. **Type a name for the group.**

3. **Drag the user icon of each person that you want to be a member of the group to the new group icon.**

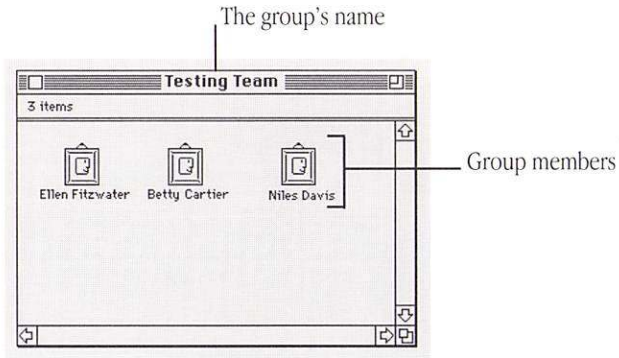
   You don't need to drag your Macintosh owner icon to the group icon because you always have access to the entire contents of your computer (unless you specify otherwise). Also, you don't need to include the <Guest> icon in any group.

   To allow this group of people to gain access to a shared folder or disk, go to the section "Selecting a User or Group to Share a Folder or Disk."

Seeing who's in a group

- **To see the names of the members of the group, open the group icon.**

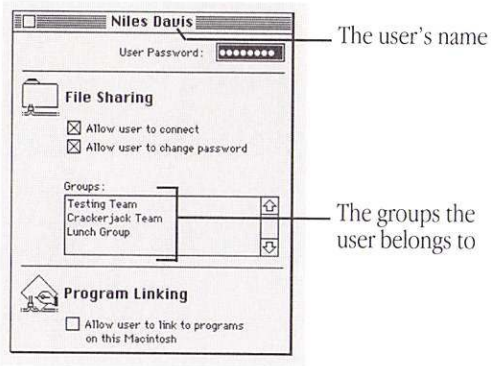
  A window opens and shows a *member* icon for every user that you added to the group.



  You can open any user's member icon if you want to see or change the settings you've made for that user.

- **To see the names of all of the groups that a user belongs to, open the user's member icon or user icon.**

  You can double-click either the member icon that appears in the group window or the original user icon that appears in the Users & Groups control panel. A window opens and displays a list of all the groups that the user belongs to.



Selecting a user or group to share a folder or disk

You can give one registered user or group exclusive access to a shared folder or disk on your computer. Make sure that file sharing is turned on and that you have named the registered user or group as described in "Naming the People Who'll Have Access to Shared Files" earlier in this chapter.

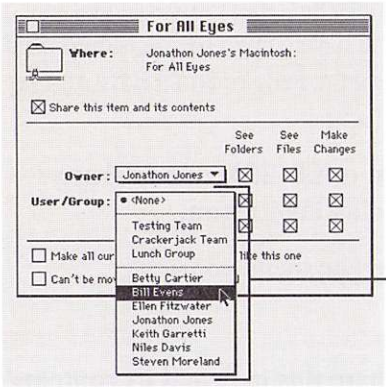
1. **Select a folder, hard disk, or CD-ROM disc to share with a user or group by clicking its icon.**
2. **Choose Sharing from the File menu.**

   A dialog box appears.
3. **Click the box labeled "Share this item and its contents" so an X appears.**

continues ▶

REFERENCE

4. **Choose a user or a group from the User/Group pop-up menu.**

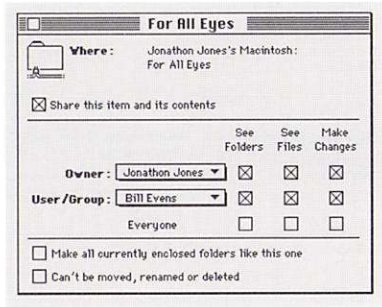


The registered users and groups you've named on your computer

The User/Group pop-up menu contains the names of the users and groups that you registered. The name you choose is displayed when you are done.

5. **To share this folder or disk with *only* the user or group that you've chosen, click the bottom row of checkboxes (to the right of Everyone) to remove the X from each box.**

Only you and the user or group you've chosen now have access to this folder or disk. For more information about access privileges and strategies to use them, see "Using Access Privileges" later in this chapter.

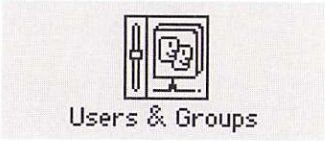


6. **Close the window and click Save in the dialog box that appears.**

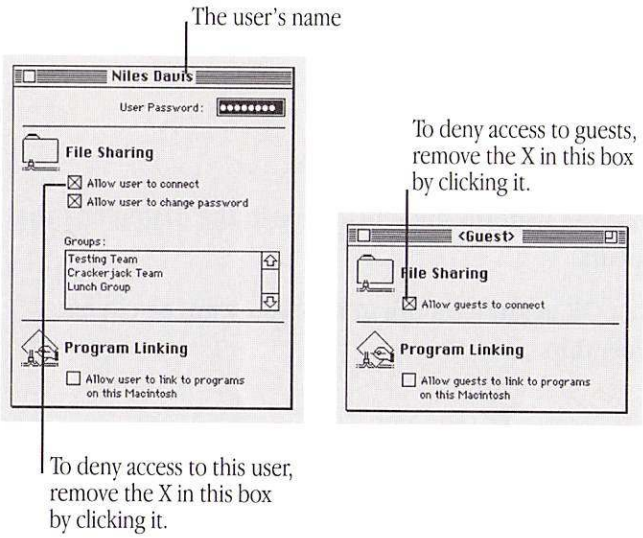
Preventing a user or guests from accessing your computer

You can prevent a specific user from connecting to your computer, or you can prevent any guests from connecting.

1. **Choose Control Panels from the Apple menu and double-click the Users & Groups icon to open it.**



2. **To deny access to a specific user, open the user icon. To deny access to guests, open the <Guest> icon.**



3. **To deny access to a user, click the box labeled "Allow user to connect" to remove the X. To deny access to all guest users, click the box labeled "Allow guests to connect" to remove the X.**

4. **Close the window and click Save in the dialog box that appears.**

   If you denied access to a specific user, that user can no longer access your computer from the network as a registered user. In addition, that user is no longer a member of any groups. If the user is currently connected, he or she is disconnected immediately. If your Macintosh is set up to allow guest access, that user can still connect as a guest.

   If you denied access to guests, any guests currently connected are disconnected immediately.

Removing a user's membership in a group

1. **In the Users & Groups control panel, open the group icon that the user belongs to.**

2. **Drag the member icon for that user to the Wastebasket.**

3. **Select Empty Wastebasket from the Special menu.**

   The user is no longer a member of that group.

Removing a user or group from your list of registered users

You can remove a registered user or group at any time. When you remove a user, that user's membership in any registered groups on your computer will be removed.

1. **Double-click the Users & Groups icon to open it.**
2. **Drag the user or group icon to the Wastebasket.**
3. **Select Empty Wastebasket from the Special menu.**

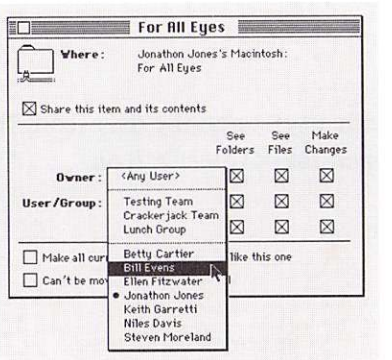
You cannot throw away the <Guest> icon or the owner icon. To prevent guest access, see "Preventing a User or Guests From Accessing Your Computer" earlier in this chapter.

Giving away ownership of a folder or disk on your computer

You can give away ownership of a shared folder or disk on your Macintosh to another registered user or a registered group. Because you are the owner of your Macintosh, a new owner of a folder on your computer cannot restrict your access to it. However, the new owner can change the access privileges that other people have to the folder or disk. If you give away ownership of a folder or disk, make sure that you move any important folders or documents out of it first so that no one else can see or alter those documents.

1. **Click to select the icon of a shared folder or disk.**
2. **Choose Sharing from the File menu.**
3. **Choose the name of a registered user, group, or <Any User> in the Owner pop-up menu.**

   If you select <Any User>, then anyone on the network can change the access privileges of the folder or disk or choose a new owner.



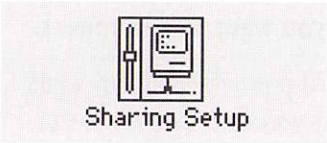
4. **Close the window and click Save in the dialog box that appears.**
5. **Click OK again to confirm that you want to change ownership.**

Turning file sharing off

You can turn off the file-sharing capability of your Macintosh at any time. When file sharing is off, people on the network cannot access any folders or disks on your computer, and you cannot access your computer from another computer on the network.

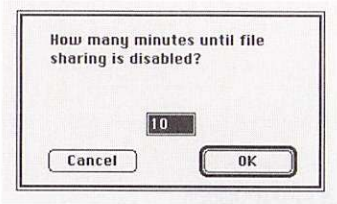
If you turn file sharing back on, all of the shared folders or disks will again be available to people on the network.

1. **Choose Control Panels from the Apple menu and open the Sharing Setup control panel.**



2. **In the section labeled File Sharing, click the Stop button.**

   If users are currently connected to your computer, a dialog box appears in which you can specify a delay before file sharing is turned off. This gives current users some time to save their work and to disconnect from your computer.



3. **Type the number of minutes you want to elapse before file sharing is turned off.**

   To disconnect users immediately, type the number 0. Otherwise, type the number of minutes to elapse before the users are disconnected.

4. **Click OK.**

File sharing is turned off after the amount of time you specify elapses. Users who are currently connected receive warning messages so they can save their work. If someone is using files on your Macintosh when file sharing is turned off, any changes he or she has made and has not saved will be lost.

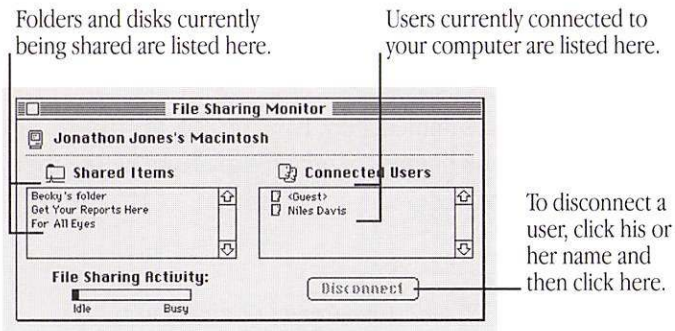
REFERENCE

Monitoring file-sharing activity

When file sharing is on, you can see who is connected to your computer and what folders or disks you've shared.

- Choose Control Panels from the Apple menu and open the File Sharing Monitor control panel.

The File Sharing Monitor control panel opens.



A list of your shared folders and disks appears on the left side of the window. All of the files and folders listed are accessible to network users, unless you have restricted their access privileges.

A scrolling list of all the network users currently connected to your Macintosh appears on the right side of the window.

Disconnecting someone who is connected to your computer

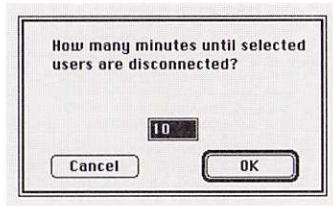
You can disconnect users who are currently connected to your Macintosh in the File Sharing Monitor control panel.

1. **Select the user or users that you want to disconnect.**

   To select more than one user, hold down the Shift key while clicking the names of all the users you want to disconnect.

2. **Click Disconnect.**

   A dialog box appears.



3. **Type the number of minutes that you want to elapse before disconnection occurs.**

   To disconnect a user immediately, type the number 0. Otherwise, type the number of minutes to elapse before the user is disconnected. It's a good idea to give people enough time to save any changes they have made to the files.

4. **Click OK.**

   If you typed a number greater than 0 in step 3, a box displays how much time will elapse before the user is disconnected. The warning box disappears when the user is disconnected. You can continue with your work in the meantime.

5. **When the designated amount of time has elapsed, close the File Sharing Monitor.**

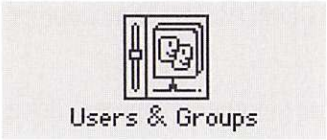
   You can't close the File Sharing Monitor until the amount of time you specified has elapsed and the user is disconnected. However, you can open other windows and continue with your work during that time.

Gaining access to your computer when you're away from it

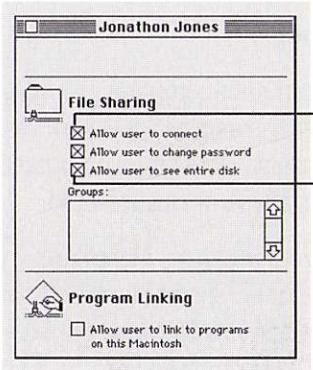
You can connect to your own Macintosh from another computer on the network and access everything on all of the hard disks or CD-ROM discs attached to your computer. As the owner of your computer, only you have this privilege.

1. **Make sure that file sharing is turned on.**

2. **Choose Control Panels from the Apple menu and double-click the Users & Groups icon to open it.**



3. **Open the owner icon (the one with the bold outline).**



continues ▶

4. **Click the boxes labeled "Allow user to connect" and "Allow user to see entire disk" to place an X in them if there isn't one there already.**

   When these boxes are checked, you can see and use everything on your hard disks or CD-ROM discs from another computer.

   To restrict the access you have from another computer, click a checkbox to remove the X.

5. **Close the window and the Users & Groups control panel.**

6. **Leave your computer turned on.**

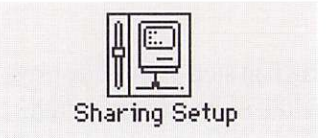
To gain access to your computer from another computer, connect to it as a registered user. Type your owner name and password (as they appear in the Sharing Setup control panel of your computer). Then continue the connection process as you normally would.

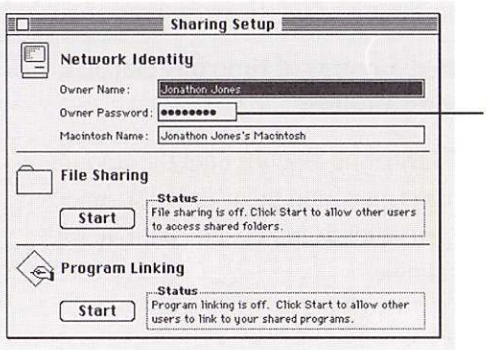
❖ *If you are unable to connect to your computer:* Make sure that your computer is turned on, that file sharing is turned on, and that you have given yourself access privileges to connect to your computer. Also make sure that you type your password exactly as it is entered in the Sharing Setup control panel, including the use of capital and lowercase letters. ❖

Changing your password

You can change the password you use to gain access to your own computer from another computer.

1. **Choose Control Panels from the Apple menu and open the Sharing Setup control panel.**





2. **Type a new password in the box labeled Owner Password.**

3. **Press Tab.**

   Each character of your password is replaced by a bullet (•) to help keep it private.

4. **Close the Sharing Setup control panel.**

   Your new password is now in effect.

Using access privileges

When people share information over a network, network users may want to control what other people can do with that information. For example, you might want to let people see a file but prevent them from changing it. This section describes how to use and work with *access privileges*—the abilities to see files and folders and make changes to them.

Before you proceed with this section, make sure you know how to share a folder on your own computer as described in "Sharing Your Files Over the Network" earlier in this chapter, or that you know how to connect to a shared disk on another computer as described in "Gaining Access to Files on Other Computers" in this chapter.

Understanding access privileges

You can set access privileges for any shared folders on your own computer and any folders you create on a file server or on another Macintosh. In addition, owners of other computers can set access privileges that restrict what you can do with their shared disks.

There are three categories of people who can have access privileges to shared disks and folders:

- *The owner.* The owner of a folder is the only person (or group) who can control the access privileges of the folder. You become the owner of a folder automatically when you create it. You can keep ownership, or give it to a registered user or registered group on the computer. You can also give ownership to <Any User>, which allows anyone on the network, including guests, to modify the folder's access privileges.
- *A registered user or group.*
- *Everyone.* Privileges assigned to guests apply to everyone, since everyone can connect to a computer as a guest (as long as guest access is allowed).

REFERENCE

Owners, registered users, and guests can be given three types of access to shared disks and folders:

- *See Folders* allows people to see the folders within a folder or disk. If people do not have the See Folders privilege, folders within a shared folder do not appear on their screen.
- *See Files* allows people to see the files within a folder or disk. If people do not have the See Files privilege, files within the folder or disk do not appear on their screen.
- *Make Changes* allows people to make changes to a folder or disk—copy files or folders to it, delete files or folders, or change any of its contents.

You need different access privileges to do certain operations with items in a shared folder or disk.

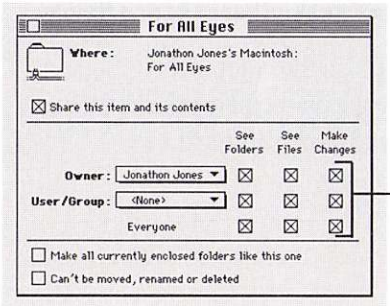
Action	See Folders	See Files	Make Changes
Copy or move files to folder	☐	☐	☒
Copy a file from folder	☐	☒	☐
Copy a folder from folder	☒	☐	☐
Create a folder in folder	☒	☐	☒
Delete a file from folder	☐	☒	☒
Delete a folder from folder	☒	☐	☒
Open and use a file in folder	☐	☒	☐
Save changes to a file in folder	☐	☒	☒

Setting access privileges to folders and disks

You can set access privileges for any shared folders or disks on your own computer and for any folders that you own on other computers.

1. **Select the folder or disk by clicking it once.**
2. **Choose Sharing from the File menu.**

   A window appears.



Use these checkboxes to set access privileges.

This window may be slightly different on your computer.

- If you've selected a folder that is inside a shared folder, the checkbox labeled "Share this item and its contents" does not appear. Instead, a checkbox labeled "Same as enclosing folder" appears.
- If you've selected a folder on another computer, the area next to the Owner and User/Group labels will be boxes, in which you type text, and not pop-up menus.
- If you've selected a folder on another computer and you are not its owner, all of the checkboxes and their labels are dimmed.

3. **Choose a registered user or group to share the item with.**

   If the folder you've selected is on your own computer, choose from the list of users and groups in the pop-up menu next to the label User/Group. This menu contains the names of the registered users and groups on your computer.

   If the folder you've selected is on another computer, type the name of a registered user or group in the box next to the label User/Group. You must type the name exactly as it is registered on the computer you're connected to.

continues ▶

REFERENCE

4. **To give access privileges to yourself, to a registered user, or to everyone, click the appropriate checkbox to place an X in it.**

   - To set privileges for the folders within this folder or disk, place an X in the box labeled "Make all currently enclosed folders like this one." When you place an X in this box, the access privileges for the folders inside this folder or disk are the same as this folder or disk's access privileges. You can change the access privileges for an enclosing folder at any time.

     If you use this feature for an item that contains a large number of folders, such as a CD-ROM disc, this action could take a few minutes to complete.

   - To prevent anyone on the network—including yourself—from moving, deleting, or renaming this folder, place an X in the box labeled "Can't be removed, renamed, or deleted." You can use this checkbox to ensure that a folder stays where you leave it.

   - To give this folder the same privileges as the folder or disk enclosing it, place an X in the checkbox labeled "Same as enclosing folder." This checkbox only appears for folders that are inside shared folders. When you move a folder that has this box checked to another folder, its access privileges change to reflect those of its new enclosing folder.

5. **When you're finished setting access privileges, close the Sharing window and then click Save in the dialog box that appears.**

   The access privileges go into effect immediately.

Access privilege strategies

You can combine access privilege settings in any way you like. Some useful configurations follow.

- **Allow everyone on the network all access privileges.**

  When guest access is allowed on the computer storing a shared folder or disk, everyone on the network can open, read, and change the files and folders inside it.

	See Files	See Folders	Make Changes
Owner	☒	☒	☒
User/Group	☒	☒	☒
Everyone	☒	☒	☒

- **Keep a folder or disk private.**

  To keep a folder or disk on your own computer private, do not share the folder. To keep a folder that you own on another computer private, use these settings. You have full access but no one else can open, use, or even see its contents.

	See Folders	See Files	Make Changes
Owner	☒	☒	☒
User/Group	☐	☐	☐
Everyone	☐	☐	☐

- **Allow access by one other person or group.**

  This set of privileges allows only you—the owner of the folder or disk—and the registered user or group that you have named to gain access to a shared folder or disk.

	See Folders	See Files	Make Changes
Owner	☒	☒	☒
User/Group	☒	☒	☒
Everyone	☐	☐	☐

- **Keep a folder private but allow others to place files or folders in it.**

  People on the network can deposit files or folders into a folder but cannot see, remove, or change its contents. (This configuration is sometimes called a drop box.)

	See Folders	See Files	Make Changes
Owner	☒	☒	☒
User/Group	☐	☐	☒
Everyone	☐	☐	☒

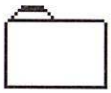
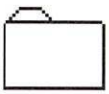
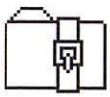
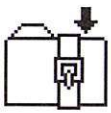
- **Set up a folder as a bulletin board.**

  People can open and read the files in a folder but cannot change them.

	See Folders	See Files	Make Changes
Owner	☒	☒	☒
User/Group	☒	☒	☐
Everyone	☒	☒	☐

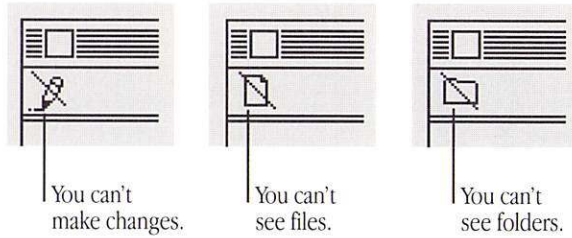
Working with privileges that others have set

When you are using the By Icon or By Small Icon view, the appearance of shared folders changes to indicate the kinds of access you have to that folder.

Icon	Meaning
	A darkened tab indicates that you are the owner of the folder and you can set its access privileges. Shared folders on your own computer have this darkened tab. Folders that you own on other computers also have the darkened tab.
	A plain tab indicates that you can open and use the folder. Folders on your own computer have a plain tab when they have not been shared. Folders on other computers that have this icon indicate that you do have some privileges to the folders, although you are not their owner.
	A folder with a strap around it indicates that you do not have any access privileges to this folder. This icon does not appear on your own computer.
	A strapped folder with an arrow indicates that you can put files or folders into this folder, but you cannot open it or use any files or folders within it. This icon does not appear on your own computer.

Checking your access privileges

When you open a folder on another computer on the network, icons are displayed under the title bar of the folder window that indicate the privileges that you do *not* have to the folder.



Linking programs over the network

Some of the programs available for your Macintosh can exchange information directly with other programs. For example, one program might be able to instruct another program to perform a specific action, such as adding a row to a spreadsheet or changing the font size of a paragraph.

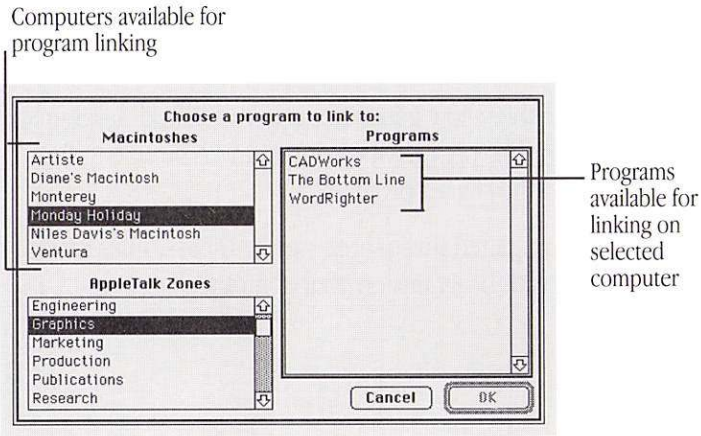
Programs implement program linking in various ways and not all programs have this capability. See the documentation that came with your programs for more information.

Linking to a program on another computer

You can only link to programs that have been shared by the owners of the computers on which the programs reside.

1. **Within your program, choose the menu command that allows you to link programs.**

   The menu location and command name differ from program to program. A dialog box opens that you use to find the program on the network that you want to link to.



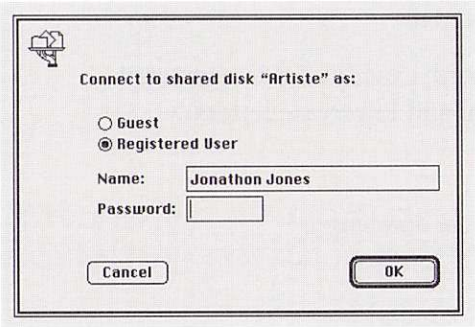
2. **If your network has zones, select the zone of the Macintosh you want to connect to in the lower-left corner of the dialog box.**

3. **Select the Macintosh you want to connect to in the upper-left section of the dialog box.**

4. **Select the program you want to link to.**

5. **Click OK.**

   In most cases, a dialog box appears, where you identify yourself as a guest or a registered user.



continues ▶

REFERENCE

6. **Click Guest or Registered User.**

   If you are a guest or if you are not certain that you are registered, click Guest and go on to step 9. If you are a registered user, click Registered User.

   If the Guest option is dimmed, guests are not permitted access to this computer.

7. **If you are a registered user, make sure that the name shown in the box labeled Name is the exact name that is registered.**

   If the name is not your user name, type your user name exactly as it is registered.

8. **Type your password, exactly as it is registered (including capital and lowercase letters).**

9. **Click OK.**

   The two programs are now linked.

Disconnecting a program link

To disconnect a link you established to a program on another computer, quit the program from which you created the link.

Allowing other people to link to your programs

You can allow people on the network to link their programs to programs on your computer.

How program linking works

You can allow other users to link to programs on your computer by taking a few discrete steps.

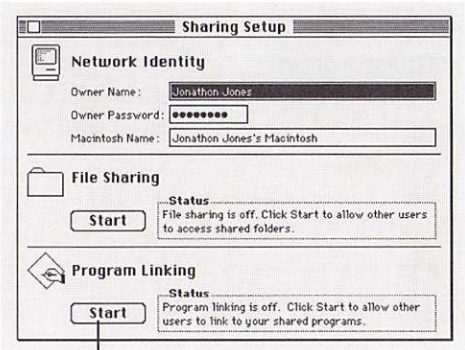
- First, you turn on program linking.
- Second, you make a specific program available for linking by *sharing* it.
- Third, you either allow guest access to the shared program or name the specific people whom you want to be able to link programs to the shared program.

When you've completed these three steps, other people can link their programs with programs on your computer.

Turning program linking on

When you turn program linking on, you let others on the network connect to your computer for the purpose of linking programs. Before you turn program linking on, make sure that AppleTalk is active (in the Chooser) and that you have named your Macintosh (see "Naming Your Macintosh and Its Owner" earlier in this chapter).

1. **Choose Control Panels from the Apple menu and double-click the Sharing Setup icon to open it.**



Click here to turn on program linking.

2. **In the section labeled Program Linking, click the Start button.**

   Program linking starts up. When program linking is established, the button changes to Stop (click the Stop button when you want to turn program linking off).

3. **Close the Sharing Setup control panel.**

   Once program linking is turned on, you must identify specific programs for linking before network users can link to them.

Selecting a program for linking

A network user cannot link to your program unless you have specifically shared it first.

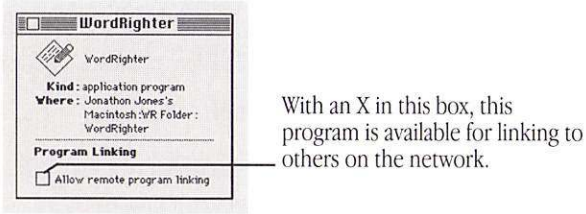
1. **Select a program on your computer that features program linking by clicking the program's icon.**

   Check the documentation that came with the program to make sure that it has this capability. If the program is open, you have to quit from it before you can share it.

continues ▶

2. **Choose Sharing from the File menu.**

   The Sharing dialog box appears.



3. **Click the box labeled "Allow remote program linking" to place an X in it (if there isn't one in it already).**

   If the checkbox is dimmed, the program you have selected does not allow program linking, so you cannot share it.

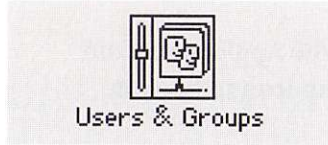
4. **Close the window.**

   After the window closes, programs on other computers can link to your program as long as your computer is turned on, program linking is turned on, and the program is running.

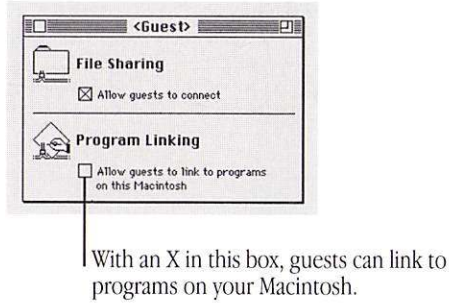
Allowing guests to link to your programs

You can let everyone on the network link programs to your shared programs.

1. **Choose Control Panels from the Apple menu and double-click the Users & Groups icon to open it.**



2. **Double-click the <Guest> icon.**



3. **Click the box labeled "Allow guest to link to programs on this Macintosh" to place an X in it (if there isn't one in it already).**

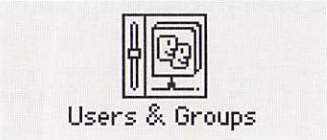
4. **Close the dialog box.**

   Guest users can now link programs to any of the programs on your computer that you have shared.

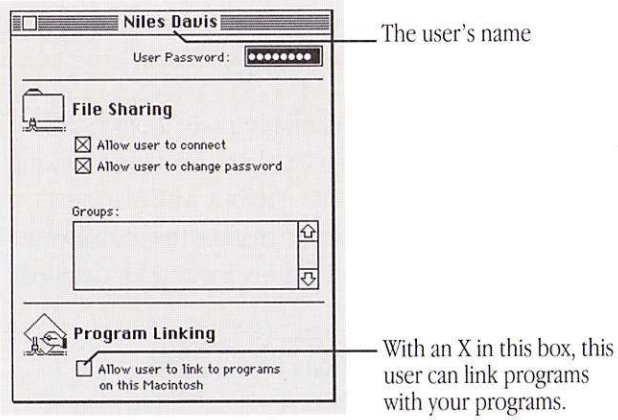
Naming specific users to link to your programs

You can identify the registered users and groups you want to allow to link to your programs. (See "Naming the People Who'll Have Access to Shared Files" earlier in this chapter for information about naming registered users and groups.)

1. **Choose Control Panels from the Apple menu and double-click the Users & Groups icon to open it.**



2. **Open the icon of a user whom you want to link programs with.**



3. **Click the box labeled "Allow user to link to programs on this Macintosh" to place an X in it (if there isn't one in it already).**

4. **Close the window and click Save in the dialog box that appears.**

5. **To give more registered users access to your programs, repeat steps 2 through 4.**

REFERENCE

Using communications products with System 7

Using the Communications Toolbox

If you have already installed the Communications Toolbox with Macintosh system software version 6.0 or later, read the following guidelines to use the Communications Toolbox with Macintosh system software version 7.0. Consult the manual that came with the program that uses the Communications Toolbox for detailed information about how to use it.

- Do not install the Communications Toolbox. The Communications Toolbox has been integrated into system software version 7.0.
- With versions of system software prior to System 7, communications tools were placed in a Communications folder in your System Folder. To use communications tools with System 7, drag them to the Extensions folder in your System Folder.
- Wherever a program or its documentation refers to the "Communications Folder," substitute "Extensions Folder."

Using Data Access Language

If you used Data Access Language (DAL) with Macintosh system software version 6.0 or later, follow the steps below to use it with Macintosh system software version 7.0. For detailed information about using your DAL application program, consult the manual that came with it.

To use programs that search for the "hosts.CL1" file, do the following:

1. **Make a copy of the DAL Preferences file that is in the Preferences folder in the System Folder.**
2. **Rename the duplicate file: Hosts.CL1.**
3. **Move the renamed file outside the Preferences folder but inside the System Folder.**
4. **Use your program as you normally do. Whenever you make changes to one of these files, you must update the duplicate file.**

Chapter 14

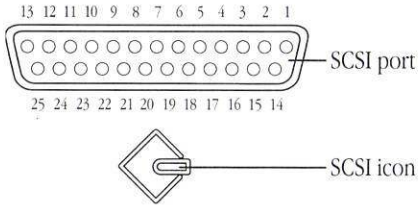
Expanding Your Macintosh System

In this chapter

- Connecting hard disks and other SCSI devices
  - Installing a device driver
  - Setting the SCSI ID number
  - Attaching a SCSI device
- Connecting a printer
- Connecting a modem
- Connecting an external floppy disk drive
- Connecting a trackball or other ADB device
- Connecting headphones or speakers
- Connecting a microphone
- Connecting additional monitors
- Installing expansion cards
  - NuBus™ power requirements
- Expanding memory

Connecting hard disks and other SCSI devices

Every Macintosh computer has a socket, or *port,* for connecting devices that use the Small Computer System Interface (SCSI, pronounced "skuh-zee"). The SCSI port permits high-speed communication between the computer and the device. The SCSI icon appears above the port on the computer's back panel.



△ **Important:** Follow the instructions in this section *and* the instructions that came with your hard disk or other SCSI device when connecting it to your Macintosh. △

REFERENCE

SCSI devices commonly used with the Macintosh include hard disks, CD-ROM drives, scanners, printers, and tape backup drives.

By connecting SCSI devices to one another (in a "daisy chain"), you can have up to seven such devices, including an internal hard disk, connected to your Macintosh. Each device must have its own, unique ID number.

Setting up a SCSI device to use with your Macintosh involves

- installing any necessary device drivers
- setting the device's SCSI ID number
- physically attaching the device to your Macintosh

Installing a device driver

To install a device driver:

- **Drag the device driver icon to the System Folder on your startup disk.**

Any device drivers needed for a SCSI device are usually on a floppy disk that comes with the device. (If no device drivers come with the device, then it doesn't need any.) You may have to restart your Macintosh to activate the device driver, which the computer needs to communicate with—or "drive"—the device.

Setting the SCSI ID number

See the instructions that came with your SCSI device for information on setting its SCSI ID number.

▲ **Warning:** Each SCSI device connected to your Macintosh must have its own, unique ID number between 1 and 6 so that your computer can distinguish it from other attached SCSI devices. Using two or more devices with the same ID number can cause them to malfunction. You could lose data as a result. ▲

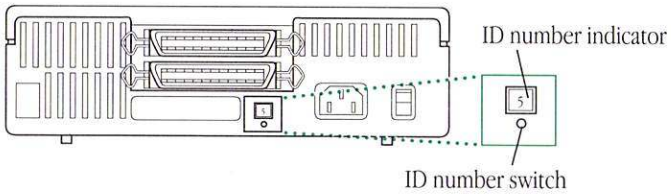
Give greater ID numbers to the devices you use more often. Your Macintosh uses the numbers to set priorities when it communicates with its SCSI devices (the greater a device's ID number, the higher its priority).

If you have an Apple SCSI device, set the SCSI ID number as follows:

1. **Make sure the device is switched off.**
2. **Choose a number between 1 and 6 that hasn't been assigned to any other SCSI device connected to your Macintosh.**

   Each device in a chain of SCSI devices connected to your computer must have its own ID number that distinguishes it from other devices in the chain. The ID number must be between 1 and 6 (if you have an internal hard disk, its ID number is preset to 0, and your Macintosh itself has the ID number 7).

3. **Insert a straightened paper clip into the small hole directly below the ID number indicator (usually on the back panel of the SCSI device). The small hole gives you access to the ID number switch.**



4. **Push the ID number switch repeatedly until the number you want appears in the ID number indicator.**

Attaching a SCSI device

To connect a SCSI device to your Macintosh:

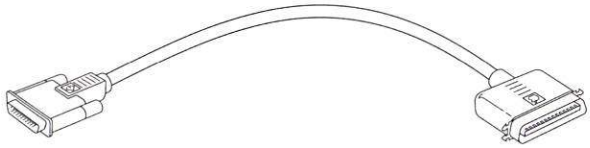
1. **Turn off your Macintosh.**
2. **Make sure the SCSI device is switched off.**

▲ **Warning:** Do not connect or disconnect any device while the device or your Macintosh is turned on. Doing so could damage the device, your computer, or both. ▲

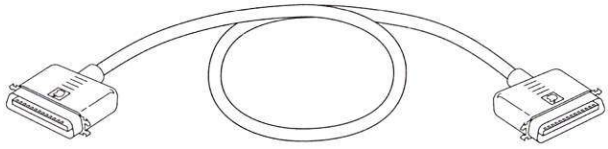
3. **Make sure the device has its own, unique ID number between 1 and 6.**

4. **Use a SCSI cable to connect the device either to the SCSI port or to the last SCSI device already in the chain.**

   If the device is the first one in the SCSI chain (or the only one you're connecting), use a SCSI system cable to connect it to the SCSI port.



   If the device is not the first one in the chain, use a SCSI peripheral interface cable to connect it to the last SCSI device already in the chain.



△ **Important:** The total length of a SCSI chain should not exceed 6 meters (20 feet). △

5. **Make sure that the first device and the last device in the SCSI chain each have a terminator and that no other external SCSI device has one.**

   To ensure accurate transmission of information, a terminator must be at each end of a SCSI chain.

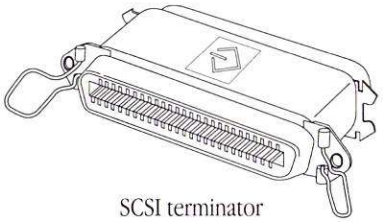
continues ▶

An internal hard disk, which is always the first device in the chain, has a built-in terminator. The Macintosh Classic, Macintosh LC, and Macintosh IIfx have built-in terminators (whether or not they have internal hard disks).

- If you have an internal hard disk, or if your Macintosh has a built-in terminator, you only have to make sure that the last device in the chain has a terminator and that no other external SCSI device has a terminator.
- If you do not have an internal hard disk or a Macintosh with a built-in terminator and are connecting your Macintosh to two or more external SCSI devices, you need terminators in the first device and the last device, and none in between.
- If you're connecting your Macintosh to a single SCSI device (whether or not you have an internal hard disk), make sure the device has a terminator.

If you have a Macintosh IIfx, use the black cable terminator that came with your computer. Do not use any other terminators with or instead of the black cable terminator. Also, you or your authorized service provider should disconnect or remove any other terminators built into your SCSI devices. Using terminators other than or in addition to the black cable terminator may cause your SCSI devices to malfunction, and you may lose data as a result.

A SCSI device may have a built-in terminator. If a device that's at the end of the SCSI chain does not have a built-in terminator, you need to attach an external cable terminator to it.



SCSI terminator

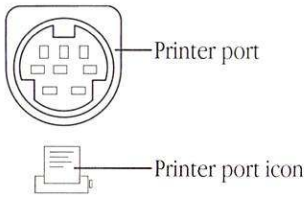
To find out if your SCSI device has a built-in terminator, go to the instructions that came with the device. (External SCSI devices from Apple Computer do not have built-in terminators.) Have your authorized Apple service provider remove any extra built-in terminators. You can attach or remove cable terminators yourself.

△ **Important:** Always turn on any external SCSI devices connected to your Macintosh before turning on the computer itself. Otherwise, your computer cannot recognize the SCSI devices. △

Check the setup book that came with your Macintosh for any additional information on connecting SCSI devices.

Connecting a printer

Every Macintosh has a printer port, which you use to connect a printer to your computer.



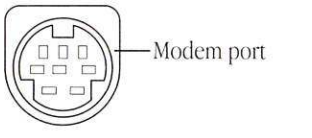
The printer port accepts either a direct cable connection (to printers such as the ImageWriter II) or a network cable connection (to printers such as the LaserWriter IINT). Certain printers (such as the Personal LaserWriter SC) are connected through the SCSI port as a SCSI device.

Follow the instructions that came with your printer when connecting it to your Macintosh.

A printer can also be connected to the modem port. You use the Chooser program to indicate the port you used to connect your printer. (See Chapter 12, "Printing," for more information.)

Connecting a modem

Every Macintosh has a modem port, which you use to connect an external modem to your computer. (A modem is a device that allows your computer to communicate with other computers over standard telephone lines).

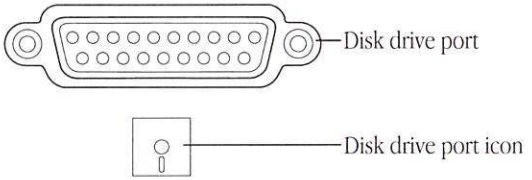


Follow the instructions that came with your modem when connecting it to your Macintosh.

You can connect a modem to the printer port (if you're not using it for a printer), but your Macintosh gives the modem port priority over the printer port when it checks for data transfer activity. This priority better ensures that any communications link your computer establishes through the modem remains intact.

Connecting an external floppy disk drive

Some Macintosh computers have a disk drive port, which you use to connect an external floppy disk drive.

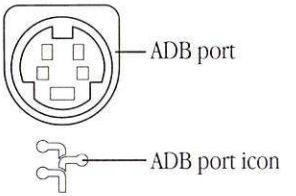


Follow the instructions that came with your external floppy disk drive when connecting it to your Macintosh.

If your Macintosh does not have a disk drive port, you can buy an external floppy disk drive that attaches to the SCSI port.

Connecting a trackball or other ADB device

Every Macintosh computer has at least one Apple Desktop Bus (ADB) port, which you use to connect the mouse, the keyboard, and other input devices such as a trackball, a bar-code reader, or a graphics tablet.

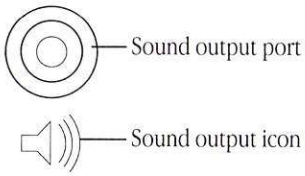


By connecting ADB devices to one another (in a "daisy chain"), you can have up to three such devices connected to a single ADB port. The exact number depends on how much power the devices require.

△ **Important:** The total power used by all Apple Desktop Bus devices connected to your Macintosh must not exceed 500 milliamperes (mA). Information about the power requirements of your mouse and keyboard are in the setup book that came with your Macintosh. See the instructions that came with any other ADB device if you need information on its power requirements. △

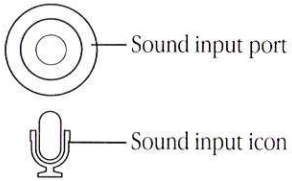
Connecting headphones or speakers

Every Macintosh computer has a sound output port, which you use to connect speakers, an amplifier, headphones, or other audio output devices to your computer. The sound output port accepts a standard stereo miniplug, like that used to attach headphones to a portable stereo audio cassette player.



Connecting a microphone

Certain Macintosh models (such as the Macintosh LC) have a sound input port, which you use to connect a microphone or other sound source to your computer. The sound input port accepts a standard miniplug.



See the setup book that came with your Macintosh for additional information on the sound input port.

See Chapter 11, "Adapting Your Macintosh to Your Own Use," for information about recording sound on your Macintosh.

Connecting additional monitors

Most Macintosh computers accept video cards that let you connect additional monitors. Your first monitor may be built-in (as in the Macintosh Classic), connected to a built-in video port (as in the Macintosh IIci), or connected to a video card installed in a NuBus slot (as in the Macintosh IIfx). See the setup book that came with your computer for information on installing video cards.

When you set up additional monitors:

- Make sure that the ventilation openings on the computer and the monitor are clear and unobstructed.
- Some large monitors cannot safely be placed on top of the Macintosh. Check the instructions that came with the monitor for setup information.
- If there is interference on your screens or on a television or radio near your Macintosh, move the affected equipment farther apart.

See Chapter 11, "Adapting Your Macintosh to Your Own Use," for information on configuring multiple monitors in the Monitors control panel.

Installing expansion cards

All Macintosh computers except the Macintosh Classic accept printed circuit boards (called *cards*) for video and graphics applications, networking and communications, additional processing power, and other purposes. The cards fit into connectors, called *expansion slots,* inside the computer.

△ **Important:** See your setup book for information on installing expansion cards. Some cards may need to be installed by an authorized Apple service provider. △

Like all electronic components, expansion cards generate heat. If you install several cards in your Macintosh, leave as much room as possible between cards and between cards and other internal components.

Macintosh expansion slots come in two types:

- NuBus slots, which accept NuBus expansion cards
- Processor-direct (or memory cache) slots

All Macintosh II models have at least one NuBus slot. (An optional slot adapter is required in the Macintosh IIsi.) In the models that have a processor-direct or memory cache slot (such as the Macintosh LC and the Macintosh IIci), only one such slot is available.

▲ **Warning:** Install an expansion card only in the slot designed to accept it. Failure to do so could damage the card and your computer. NuBus cards fit in any NuBus slot, but a processor-direct or memory-cache card is often designed only for a specific Macintosh model. ▲

NuBus power requirements

The combined power consumption of all installed NuBus cards must not exceed the limits specified for your Macintosh model. If you have two or three NuBus cards installed or are concerned about the amount of power consumed by a particular card, make sure that your NuBus cards' power consumption is within specified limits.

1. **Find out the power consumption (in amperes) of each NuBus card you have installed by checking its technical specifications.**

   NuBus cards draw power from three types of current:

   - +5 volt
   - +12 volt
   - –12 volt

2. **Calculate the total power consumption in each type of current of all installed NuBus cards.**

3. **Find out the maximum power consumption for all NuBus cards specified for your Macintosh by checking the setup book that came with your computer.**

▲ **Warning:** Do not exceed the maximum power consumption for all NuBus cards specified for your computer. Doing so could damage your cards, your Macintosh, or both. ▲

Expanding memory

The random-access memory (RAM) in your Macintosh can be expanded by adding Single In-Line Memory modules (or SIMMs) to those already installed or exchanging installed modules for ones that have greater storage capacity. (Some Macintosh models also accept memory expansion through the installation of a memory card.)

Make sure that SIMMs you purchase for memory expansion are the correct ones for your Macintosh. See the setup book that came with your computer for more information.

▲ **Warning:** Memory expansion on the main circuit board should be installed only by an authorized Apple service provider or other qualified technician. Modification of the circuit board by anyone except a qualified technician voids your warranty and could damage your computer. ▲

Chapter 15

Care and Maintenance

In this chapter

- Handling system components
  - Monitor
  - Keyboard
  - Floppy disks and drives
  - Power supply
- Cleaning system components
  - Cleaning the mouse
- Maintaining the proper operating environment
- Changing the clock battery
- Service and support

Handling system components

Follow these guidelines when setting up and using your Macintosh computer and its components:

- Handle all components with care.
- Place components on a sturdy, flat surface.
- Carefully follow all setup instructions.
- Always hold a cable by its connector (the plug, not the cord) when connecting or disconnecting it.
- Never force a connector into a port. If connector and port do not join with reasonable ease, they probably do not match. Make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port.
- Turn off your Macintosh and all its components before connecting or disconnecting any cables to add or remove any component. Failure to do so could seriously damage your equipment.

- Take care not to spill any food or liquid on the computer, keyboard, mouse, or other components. If you do, turn your Macintosh off immediately and unplug it before cleaning up the spill. Depending on what you spilled and how much of it got into your equipment, you may have to bring your equipment to an authorized Apple service provider.

▲ **Warning:** Plug the power cords for the Macintosh and its components only into three-prong, grounded outlets. The computer's grounding-type plug is a safety feature. Do not defeat the purpose of this plug. Disconnect the power plug if it becomes frayed or otherwise damaged. ▲

Monitor

Follow these procedures whether your Macintosh has a built-in or a separate monitor:

- Turn down the screen brightness control if you leave the Macintosh turned on for extended periods. If the brightness is not turned down, the image on the screen could "burn in" and damage the screen.

  You can also use a "screen saver" program, which dims or varies the image on the screen when the Macintosh has been idle for a specified period of time. These programs are available from independent suppliers and user groups.

- Make sure that the ventilation openings on the computer and the monitor are clear and unobstructed.

- Some large monitors cannot safely be placed on top of the Macintosh. Check the instructions that came with the monitor for setup information.

- If there is interference on the monitor's screen or on a television or radio near your Macintosh, move the affected equipment farther away.

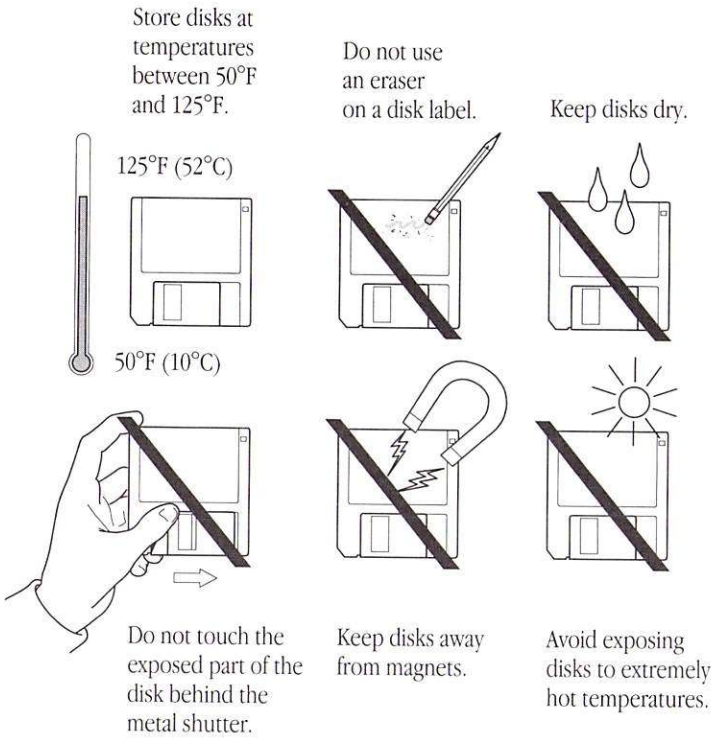
Keyboard

Take care not to spill any liquid on the keyboard. If you do, turn off your Macintosh immediately.

- If you spill liquid that is thin and clear, unplug the keyboard, turn it upside down to let the liquid drain out, and let it dry for 24 hours at room temperature. If, after you take these steps, the keyboard doesn't work, take it to your authorized Apple service provider for repair.

- If you spill liquid that is greasy, sweet, or sticky, unplug the keyboard and take it to your authorized Apple service provider for repair.

Floppy disks and drives



Power supply

The power supply in your Macintosh is a high-voltage component and should not be opened for any reason, even when the computer is off. If the power supply needs service, contact your authorized Apple dealer or service provider.

Cleaning system components

To clean the outside of your Macintosh and its components:

- Use a damp, soft, lint-free cloth to clean the computer's exterior. Avoid getting moisture in any openings.
- Don't use aerosol sprays, solvents, or abrasives.
- To clean the screen, put household glass cleaner on a soft cloth and wipe the screen. Don't spray the cleaner directly on the screen, because the liquid might drip into the monitor or computer.

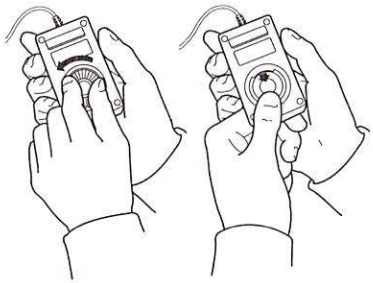
Cleaning the mouse

The mouse contains a small ball that must roll smoothly for the mouse to work properly. You can keep this ball free of dirt and grease by using the mouse on a clean, lint-free surface and cleaning it occasionally.

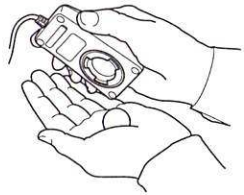
You need a few cotton swabs, alcohol, and a clean, soft, lint-free cloth.

1. **Turn off your Macintosh.**
2. **Turn the mouse upside down and remove the plastic ring on the bottom that holds the ball.**

   The plastic ring comes in two types. You remove one by turning it counterclockwise; you remove the other by pulling the ring downward until it pops out.

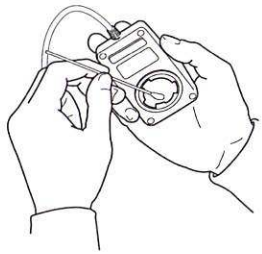


3. **Turn the mouse right side up with one hand and catch the ring and the ball with your other hand.**



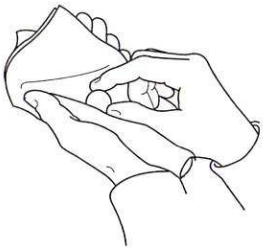
4. **Clean the three small rollers inside the mouse with a cotton swab moistened with alcohol.**

   Rotate the rollers to clean all around them.



5. **Wipe the mouse ball with a clean, soft, dry, and lint-free cloth.**

   Don't use any liquid to clean the ball.



6. **Gently blow into the mouse case to remove any dust that has collected there.**
7. **Put the ball and the ring back in place.**

Maintaining the proper operating environment

In general, any conditions in which you are reasonably comfortable should be fine for your Macintosh.

- See the setup book that came with your computer to find out the range of temperature and humidity that your Macintosh is designed to operate within.
- Protect the Macintosh and its components from direct sunlight and rain or other moisture.
- Keep all ventilation openings clear and unobstructed. Without proper air circulation, components can overheat, causing damage or unreliable operation.

Changing the clock battery

Every Macintosh computer has a clock that runs continuously. When the computer is turned off, a battery keeps the clock running.

If your clock begins to keep time inaccurately, have your authorized Apple service provider replace the battery.

Service and support

To help you get the best performance from your system, Apple Computer has established authorized Apple dealers who offer full support. If you need answers to technical questions or information about product updates, your authorized Apple dealer can help you. Apple's technical support organization backs each dealer and international technical support group via an AppleLink network, a state-of-the-art on-line electronic information service, to ensure prompt, reliable assistance.

Your dealer has the latest information on new hardware and software products as well as product updates. If you wish to upgrade your system, your dealer can help you select compatible components.

If your product requires service, your local authorized Apple dealer is trained and ready to support you. Apple provides factory-quality parts and the latest available diagnostic equipment to the more than three thousand authorized Apple service centers throughout the world. Apple guarantees parts and warranty labor. (Regulations in each country determine the length of warranty. Some restrictions may apply, depending on the country of original purchase.)

If for some reason you cannot return to the authorized dealer from whom you purchased your system, go to the nearest service location. For the location nearest you, in the United States or Canada, call or write to one of the following:

Apple Computer, Inc.
Customer Relations
20525 Mariani Avenue
Cupertino, CA 95014-6299
U.S.A.
800-538-9696

Apple Canada, Inc.
7495 Birchmount Road
Markham, Ontario, L3R 5G2
Canada
800-268-7796 or
800-268-7637

For locations in other countries, either call the Apple headquarters in your country or write to the United States address given above.

Apple also offers service plans designed to meet your needs. One of these is the AppleCare Service Agreement (available in the United States, Canada, and Australia only), which extends full warranty coverage up to three years. Your AppleCare contract will be honored at any participating authorized Apple dealer within the country of purchase—an added benefit if you relocate. Local service means time saved in getting your Apple system back to work.

You can purchase AppleCare at any time, but it's a good idea to purchase it with your system, or at least before your warranty has expired, to avoid an inspection at your own expense.

Chapter 16

Tips and Troubleshooting

In this chapter

- Getting the best-looking fonts
- Taking a "snapshot" of the screen
- When you run into trouble
  - Take your time
  - Start over
  - Rebuild your desktop regularly
  - Solutions to common problems

Getting the best-looking fonts

To have fonts look their best on the screen, install bitmapped fonts in the sizes you use most often. And for the closest match between displayed fonts and printed fonts, install the corresponding bitmapped fonts when you install PostScript outline fonts.

Your Macintosh looks for either outline fonts or bitmapped fonts to use depending on

- whether the font is displayed on the screen or printed on a printer, and
- whether (if the font is printed) the printer is equipped to handle PostScript (a programming language that describes the characters, symbols, and images appearing on each page of a document)

When you print a document on a PostScript printer (such as the LaserWriter IINT), the system software looks for the fonts you use in the following places, in order:

1. PostScript outline fonts in the printer's permanent memory (ROM)
2. PostScript outline fonts in the printer's temporary memory (RAM)
3. PostScript outline fonts in any hard disk connected to the printer
4. PostScript outline fonts in your System Folder
5. TrueType outline fonts in your System Folder
6. bitmapped fonts in your System Folder in the correct size
7. bitmapped fonts in your System Folder in a different size that can be reduced or magnified to roughly approximate the correct size

When you print a document on a printer that does not recognize PostScript (such as the Personal LaserWriter SC), and when the Macintosh displays fonts on the screen, the system software looks for the fonts as follows:

1. bitmapped fonts in your System Folder in the correct size
2. TrueType outline fonts in your System Folder
3. bitmapped fonts in your System Folder in a different size that can be reduced or magnified to roughly approximate the correct size

Taking a "snapshot" of the screen

You can capture the image on the screen by pressing ⌘-Shift-3. The image is saved as a graphics file, which can be opened in many programs that handle graphics (including the TeachText program that's supplied with the system software).

The graphics files are named "Picture 1," "Picture 2," and so on. The number of screen images you can take is limited only by available disk space.

When you run into trouble

For specific troubleshooting information related to a particular procedure, go to the chapter that describes the procedure.

Take your time

When you see an error message, you don't have to take action immediately. The message stays on the screen until you click the OK button or turn off the Macintosh.

To help diagnose and correct the problem, gather as much information about the situation as you can before starting over:

- Make a note of exactly what you were doing when the problem occurred. Write down the message on the screen and its ID number (if any) as well as the programs you were using and the names of any items you know have been added to the System Folder since the system software was installed. (This information will help a service person diagnose the problem should you need to take the computer to your authorized Apple dealer for repair.)
- Check the screen for any clues. Is a menu selected? What programs and document icons are open? Note anything else that seems relevant.
- If you were typing text and were not able to save it before the problem occurred, you can write down the parts of the text still visible on the screen so that some of your work will be easy to replace.
- Ask other Macintosh users about the problem you're having; they may have a solution for it.

Start over

Often you can eliminate a problem simply by clearing the computer's memory and starting over.

If you can, save any open documents before restarting the Macintosh. If your system is "frozen" and does not respond to any input, or if you have a "bomb" message on the screen, saving may not be possible. You can try pressing ⌘-Option-Esc to quit the program in use when the problem occurred; if this works, you can then save the documents open in other programs before restarting.

To restart your Macintosh, try the following steps:

1. **If you can, choose Restart from the Special menu or from the dialog box that's on screen.**
2. **If you can't choose Restart, hold down the ⌘ and Control keys while you press the Power On key.**
3. **If nothing happens, look for the reset and interrupt switches on the front or side of your Macintosh and press the reset switch (the one marked with a triangle).**

   Not all Macintosh models have reset and interrupt switches, which are usually installed as a unit when the computer is first set up.

   Pressing the reset switch is like turning the power switch off and on. (The interrupt switch is intended for use by programmers who have debugging software installed.)

continues ▶

4. **If pressing the reset switch does nothing or if your Macintosh does not have a reset switch, turn off your computer using the power switch, wait at least 10 seconds, then turn it on again.**
5. **If the power switch doesn't turn off the computer, unplug your Macintosh.**

If you suspect that the problem is with a peripheral device, such as a printer or external hard disk, turn it off for 10 seconds or more, then turn it on again and restart the Macintosh.

Rebuild your desktop regularly

A process known as "rebuilding the desktop" helps your Macintosh keep track of data on your startup disks.

- To rebuild the desktop of a startup disk, hold down the Option and ⌘ keys while starting up your computer. Keep holding down the keys until you see a message asking whether you want to rebuild the desktop. Click OK.
- Rebuild the desktop of your startup disks once a month or so.

Solutions to common problems

The computer is turned on but the screen is dark

The Macintosh or the monitor is not getting power, or the screen is adjusted too dark.

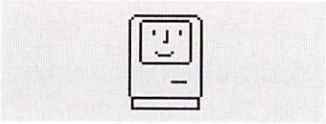
- Check that the power cord is plugged in and firmly connected to the computer and that the electrical outlet has power.
- If you have a separate monitor, check that the monitor is turned on.
- Check the screen's brightness control and turn it up if necessary.
- If you use a screen saver program, press a key or move the mouse to turn off the screen saver.

When you start up, an icon appears in the middle of the screen and the desktop doesn't appear

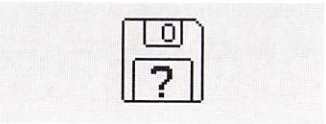
The system software is not installed on your hard disk or your hard disk is not working properly.

When you turn on the Macintosh, one of these icons appears in the middle of the screen:

- The "happy Macintosh" icon indicates that your Macintosh has found a startup disk (which has the system software installed in the System Folder) and is starting up.

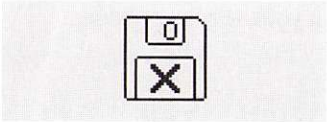


- The disk icon with a blinking question mark indicates that your Macintosh cannot find a startup disk. If you inserted a floppy disk, or if you have a hard disk installed, your Macintosh doesn't recognize that disk as a startup disk.

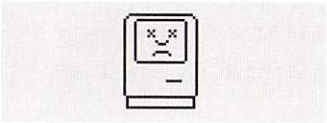


Use the system software disk labeled *Disk Tools* to start up your Macintosh. (See "Starting Up With a Floppy Disk" in Chapter 8, "Setting Up Your Macintosh System," and "Testing and Repairing Disks" in Chapter 9, "Hard Disks and Floppy Disks," for instructions on starting up with a floppy disk and repairing damaged disks.)

- The disk icon with an X appears when your Macintosh ejects a floppy disk that is not a startup disk.



- The "sad Macintosh" icon appears when your Macintosh cannot start up because of a problem with the system software or possibly the computer hardware.



Eject any floppy disks by turning off the computer and then holding down the mouse button while you turn the computer on again. Try starting up with a different startup disk. If the "sad Macintosh" icon appears again, see your service provider.

The pointer doesn't move when you move the mouse

The mouse is not connected properly or its signals are not reaching the computer.

- Turn off the computer using the power switch, then check that the mouse cable is connected properly.
- Clean the mouse. (See Chapter 15, "Care and Maintenance.")
- Restart the Macintosh with a different startup disk. If the pointer still doesn't move, consult your service provider.

Typing on the keyboard produces nothing on the screen

The insertion point hasn't been set, no text is selected, the keyboard is not connected properly, or its signals are not reaching the computer.

- Make sure the program you want to type in is the active program.
- Place the pointer in the active window and click to set an insertion point or drag to select text (if applicable).
- Turn off the computer, then check that the keyboard cable is connected properly at both ends.
- If the connections are secure and typing still yields no results, shut down and turn off the Macintosh, then unplug the keyboard cable. Connect the cable to the other Apple Desktop Bus port on the computer and the other ADB port on the keyboard. (You may have to unplug the mouse to do this.) If typing still shows nothing on the screen, the problem is most likely in the keyboard itself.
- Restart the Macintosh with a different startup disk. If typing still doesn't produce text on the screen, see your service provider.

A dialog box with a bomb appears

Your system has a software problem.

- Write down what you were doing when the message appeared, and write down the number on the message, if there is one.
- Restart your Macintosh (see "Start Over" earlier in this chapter).
- Check the startup disk and program you were using when the message appeared. Make sure that all programs, desk accessories, and system extensions you're using are compatible with the system software. Reinstalling the system software may correct the problem.
- Sometimes incompatible system extensions or control panels can cause system software problems. Restart while holding down the Shift key; this disables all system extensions. If startup is normal with this method, then remove all extensions and put them back into the System Folder one at a time, starting up after you add each extension. This procedure should identify any incompatible extensions.

The pointer "freezes" on the screen

Your system has a software problem.

- Press ⌘-Option-Esc to close the program in use when the problem occurred. If this works, you can then save the documents open in other programs before restarting.
- Restart your Macintosh (see "Start Over" earlier in this chapter).
- Check the startup disk and program you were using when the message appeared. Make sure that all programs, desk accessories, and system extensions you're using are compatible with the system software. Reinstalling the system software may correct the problem.

Your program quits unexpectedly

The program needs more memory than your Macintosh has available, or the program requires a floating-point unit (FPU) and your Macintosh doesn't have one.

- Quit from the programs that you have open and then open the program you want to use, or restart your Macintosh.
- Check the documentation that came with the program to find out if the program requires a Macintosh with an FPU, and check the setup book that came with your Macintosh to find out if your computer is equipped with an FPU, or if an FPU can be installed. Consult your authorized service provider for information about installing an FPU in your computer.

Summary

Working on the Macintosh Desktop

In this chapter

- Using the mouse
- Working with icons
- Working with windows
- Working with menus
- Keyboard shortcuts in the Finder and in directory dialog boxes
- Working with disks
- Working with programs

Using the mouse

Point

- **Point to an object on screen by moving the mouse so that the pointer is over that object.**

  When the pointer is an arrow, the tip of the arrow must be over the object.

Click

- **Click an object on screen by pressing and quickly releasing the mouse button while the pointer is over that object.**

  Clicking an object selects it.

REFERENCE

Drag

- **Drag an object on screen by pointing to that object and holding down the mouse button while you move the mouse.**

  Dragging an object from one disk to another copies it, dragging an object from one place to another on a single disk moves it within that disk without making a copy, and dragging an object to the Wastebasket throws it away.

Press

- **Press by holding down the mouse button without moving the mouse.**

  Pressing a menu name opens the menu.

Double-click

- **Double-click an object on screen by pointing to the object and clicking twice in rapid succession, without moving the mouse.**

  Double-clicking is a common shortcut for opening an icon or the selected item in a directory dialog box.

Shift-click

- **Hold down the Shift key while clicking.**

  Shift-clicking is a way to select more than one icon or item in a list.

Working with icons

Icons on the Macintosh desktop represent disks (floppy disks and hard disks) and files (programs and documents). When you open an icon, its window appears, showing you what's "inside" the disk or file.

Selecting icons

To do this	Take these steps
Select an icon	Click the icon.
Deselect an icon	Click anywhere except the selected icon.
Select multiple icons	While holding down the Shift key, click each icon.
Deselect an icon in a group of selected icons	While holding down the Shift key, click the icon.
Select multiple icons that are near each other	1. Place the pointer at one corner of the group of icons. 2. Drag diagonally to select the icons, then release the mouse button.
Select contiguous icons in a list	1. Place the pointer to the left of the top icon or the bottom icon. 2. Drag up or down the list, releasing the mouse button when the pointer is left of the last icon.
Select text in an icon's name	1. Click the icon's name to select it. 2. Place the pointer at one end of the text to be selected. 3. Drag to select the text, then release the mouse button.

Opening an icon

You open an icon by selecting it and choosing Open from the File menu or using the keyboard shortcut ⌘-O or ⌘-Down Arrow. Or you can double-click the icon.

Moving, copying, and renaming an icon

To do this	Take these steps
Move an icon	Drag the icon to where you want it.
Copy an icon onto another disk	Drag the icon to the icon of the other disk (or to an icon or window that belongs to that disk).
Copy an icon on the same disk	1. Click the icon to select it. 2. Choose Duplicate from the File menu, or press ⌘-D. 3. If you wish, rename the icon and drag it to a new location. You can also make a copy by holding down the Option key while you drag the file's icon to where you want the copy.
Rename an icon	1. Select the icon's name by clicking the name (not the icon). 2. Type a new name and press the Return key.

Storing icons in a folder

Drag the icons to the folder until both the icons and the folder are selected, and then release the mouse button.

Removing an icon

You remove an icon from the desktop or any Finder window by dragging it to the Wastebasket. To erase the contents of the icon from your disk, you choose the Empty Wastebasket command from the Special menu.

The Wastebasket displays a warning before its contents are discarded. You can't throw away a locked file or an item that's currently in use.

Working with windows

A window appears when you open an icon to show you what's "inside" the icon.

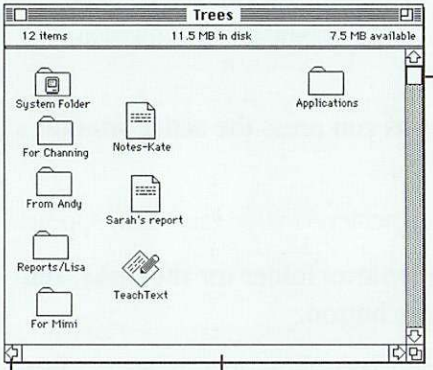
Making a window the active window

You make a window active by clicking inside it. You may have to move or resize other windows if the one you want to make active is covered by other windows. You can also make a window active by clicking its icon (even though it's dimmed) and choosing Open from the File menu, or by double-clicking the dimmed icon.

Moving a window and changing its size

To do this	Take these steps	
Move a window		Drag the window's title bar (at the top of the window) to the new location.
Resize a window		Drag the size box (in the lower-right corner).
		Or click the zoom box (in the upper-right corner).
Close a window		Click the close box (in the upper-left corner). Or choose Close from the File menu. Or press ⌘-W.

Scrolling through the contents of a window



Scroll box (shows relative location in window)

Scroll arrow (used to view the content beyond the window's borders)

Every window has two scroll bars, one for vertical scrolling and one for horizontal scrolling. (A gray scroll bar indicates more content beyond window's borders; a clear bar indicates all content is visible.)

- **Click the up, down, left, or right scroll arrow.**
- **Click the vertical or horizontal scroll bar (when it's gray).**
- **Drag the vertical or horizontal scroll box along its scroll bar.**

REFERENCE

Opening higher-level folder windows

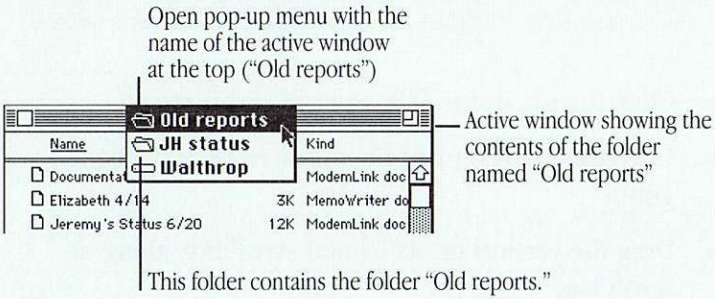
You can open a higher-level folder window (whose contents include the active window) from a pop-up menu in the active window's title.

1. **Hold down the ⌘ key as you press the active window's title.**

   A pop-up menu of the higher-level folders (and disk) appears.

2. **Drag to choose a higher-level folder (or the disk), and then release the mouse button.**

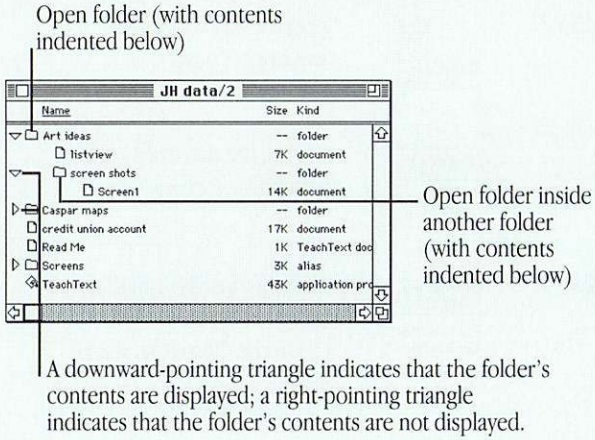
   The folder (or disk) window you chose appears as the active window.



If you hold down the Option key as well as the ⌘ key, the old window closes when the new window appears.

Using the outline form in list views

Any list view you choose from the View menu (that is, any view except the icon and small icon views) shows the contents of the active window in outline form. You can see the contents of a folder without opening the folder in its own window.



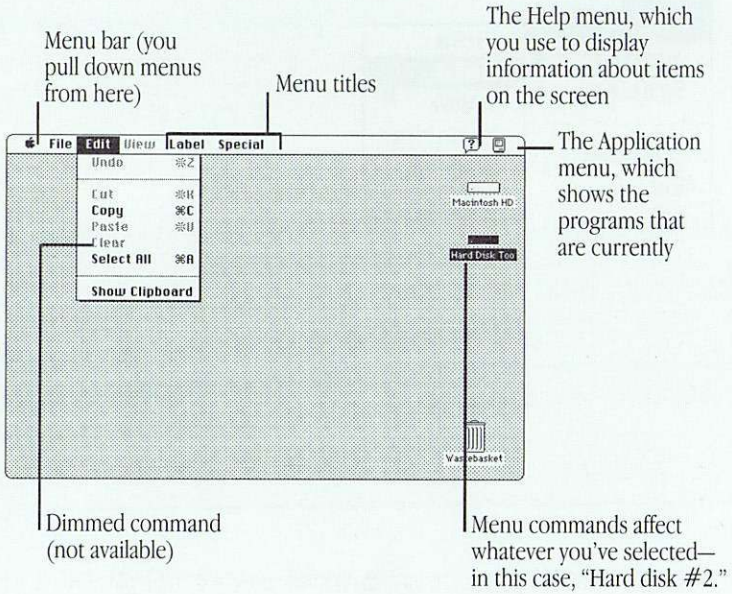
Click the triangle next to a folder name to display or hide the folder's contents in the active window.

If you double-click a folder, it opens in its own window, and its outline view closes.

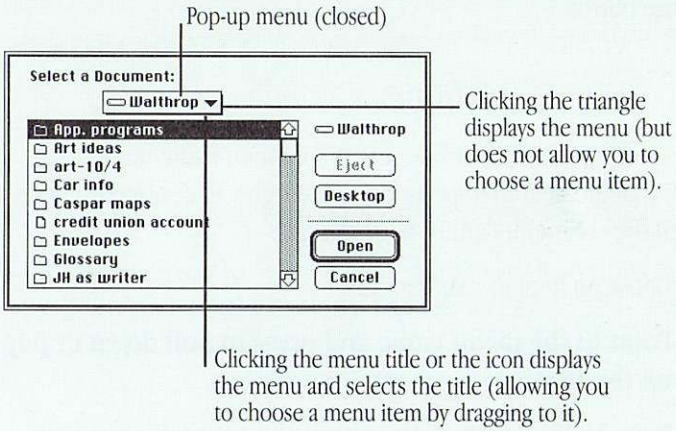
❖ *Shortcuts:* When a folder is selected in an outline view, pressing ⌘-Right Arrow displays the list of its contents and ⌘-Left Arrow hides the list of its contents. ❖

Working with menus

Macintosh menus come in two types: pull-down menus and pop-up menus. The menus in the menu bar are pull-down menus.



Pop-up menus often appear in dialog boxes that you use to set options or preferences. You can recognize a pop-up menu by a small solid triangle, pointing down, next to its name. The name shows the current option or preference.



Choosing an item from a menu

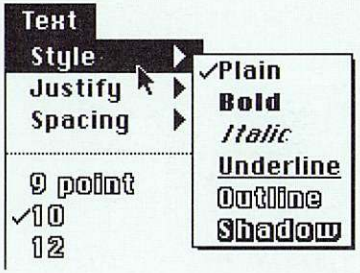
To choose a command from a menu, point to the menu name, press to "pull down" or "pop up" the menu, drag to the item you want to choose so that it's highlighted, and then release the mouse button.

Choosing an item from a submenu

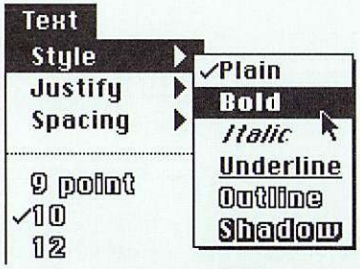
Some menu items are submenus. A submenu name has a small solid triangle next to it, pointing to the right. The submenu opens when the submenu name is highlighted.

To choose an item in a submenu:

1. **Point to the menu name and press to pull down or pop up the menu.**
2. **Drag to the menu item so that the submenu appears.**



3. **Drag sideways to the submenu, drag down to the submenu item you want to choose so that it's highlighted, and then release the mouse button.**



Keyboard shortcuts in the Finder and in directory dialog boxes

Key	Action
Up, Down, Left, or Right Arrow key	Selects the next item in the direction of the arrow
Tab key	Selects the next item alphabetically (except in a directory dialog box and the Chooser)
Character key (a, b, c . . .)	Selects the first item whose name begins with that character (or the character following closest to it in the alphabet)
⌘–Down Arrow	Opens the selected icon
⌘-Option–Down Arrow	Opens the selected icon and closes the current folder
⌘–Up Arrow	Opens the folder that contains the current folder
⌘-Option–Up Arrow	Opens the folder that contains the current folder and closes the current folder
Return or Enter	In the Finder: Selects the selected icon's name for editing or saves the edited name
	In a dialog box: the same as clicking the button with the bold outline around it

Working with disks

See Chapter 9, "Hard Disks and Floppy Disks," for more information about using disks.

Inserting a floppy disk

1. **Hold the disk between thumb and forefinger, with the label facing upward and the metal shutter pointing away from you.**
2. **Gently push the disk into the floppy disk drive, label side up and metal shutter first, until the disk drive pulls the disk in the rest of the way.**

Copying the contents of a disk

1. **Click the disk icon to select it.**
2. **Drag the disk icon to the icon that represents the disk where you want the copy made until both disk icons are selected.**
3. **Release the mouse button.**

   Respond to any messages that appear by clicking the appropriate buttons.

Removing a floppy disk from the disk drive

1. **Click the disk icon to select it.**
2. **Choose Put Away from the File menu.**
3. **When the floppy disk drive ejects the disk, remove it from the disk drive.**

You can also drag the disk icon to the Wastebasket. This action ejects the disk; it does *not* erase the disk.

Locking and unlocking a floppy disk

1. **Hold the disk between thumb and forefinger, with the label facing upward and the metal shutter pointing away from you (as if you were going to insert the disk into a drive).**
2. **Find the square hole in the lower-left corner of the floppy disk.**
3. **Lock the disk by sliding the tab on the back side of the disk so that the square hole is open.**

   Unlock the disk by sliding the tab back so that the square hole is blocked.

Working with programs

For specific information about a particular program, go to the manuals that came with the program.

Saving your work

- **Choose Save from the File menu, or hold down the ⌘ key as you press the S key.**

Switching programs

- **Click anywhere in a window to make it the active window and its program the active program.**

  You can also choose the program from the Application menu.

Closing a document

- **Click the close box of the document window near the left end of the title bar, or choose Close from the File menu.**

  Respond to any messages that appear by clicking the appropriate buttons.

Quitting a program

- **Choose Quit from the File menu, or hold down the ⌘ key as you press the Q key.**

  Respond to any messages that appear by clicking the appropriate buttons.

Backing up your files

1. **Click to select the icon of the document or program you want to back up.**
2. **Drag the icon to the disk icon where you want to store the backup copy until both icons are selected, then release the mouse button.**

   Respond to any messages that appear by clicking the appropriate buttons.

Making a copy of a file

1. **Click to select the file icon.**
2. **Choose Duplicate from the File menu.**

Saving another version of a document

1. **Open the document.**
2. **Make the changes you want in the new version.**
3. **Choose Save As from the File menu.**
4. **Type the name of the new version.**
5. **Click Save.**

Appendix A

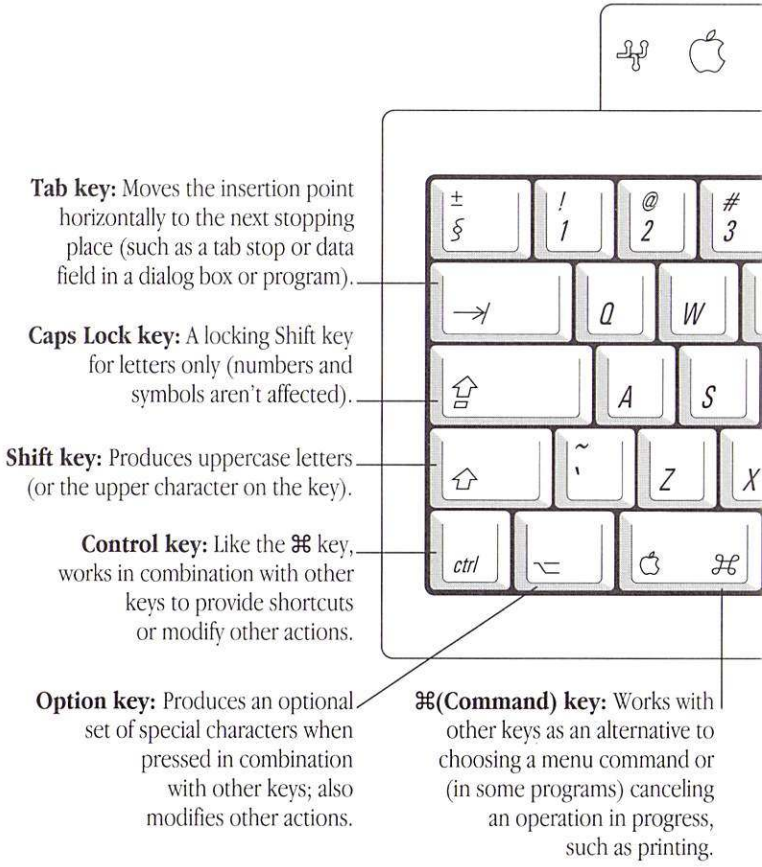
Keyboards and Character Sets

This appendix shows the layout of the Macintosh Classic and Macintosh LC standard keyboard, the Apple Keyboard, and the Apple Extended Keyboard II.

"Typing Non-English Characters and Special Symbols" is at the end of this appendix.

Macintosh Classic and Macintosh LC standard keyboard

For instructions on adjusting the height of this keyboard, go to Chapter 8, "Setting Up Your Macintosh System."

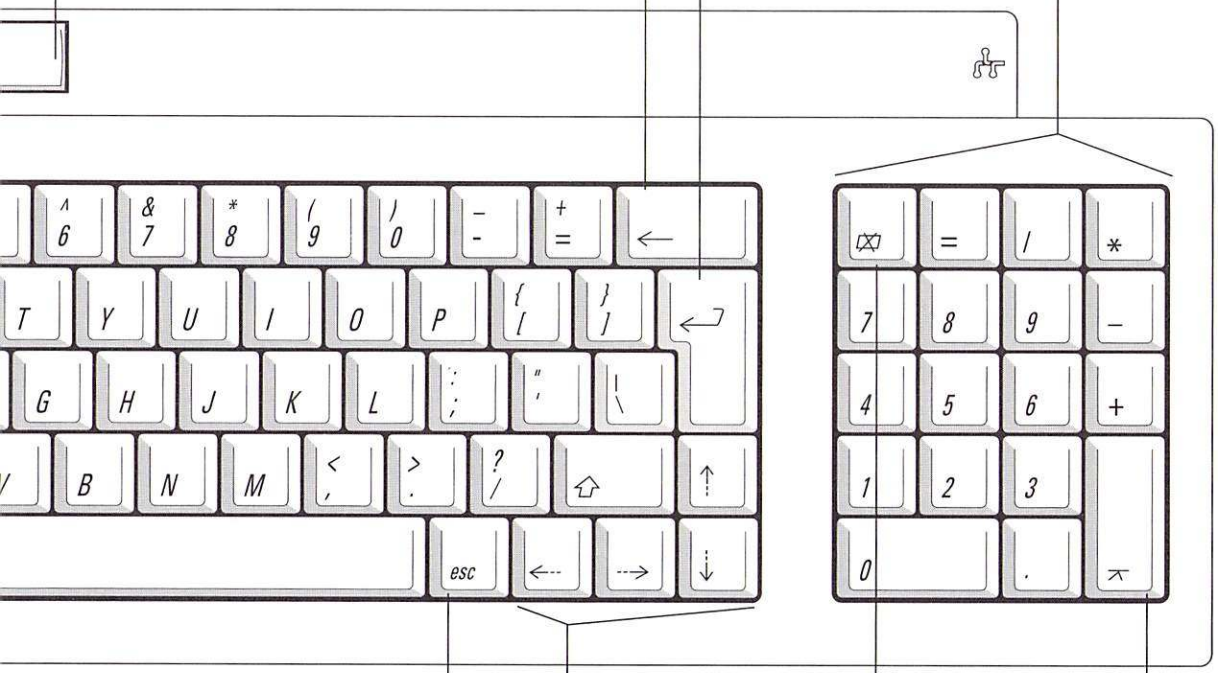


Power On key: On Macintosh II models, pressing this key turns on the computer. On the Macintosh Classic, this key has no function.

Delete key: Deletes any material currently selected, or whatever character is to the left of the insertion point.

Return key: Moves the insertion point to the beginning of the next line. In a dialog box, pressing Return is the same as clicking the outlined button.

Numeric keys: These keys produce numbers and mathematical symbols; some programs allow you to use these keys as function keys to initiate an action.



Escape key: The function of this key depends on the program you're using.

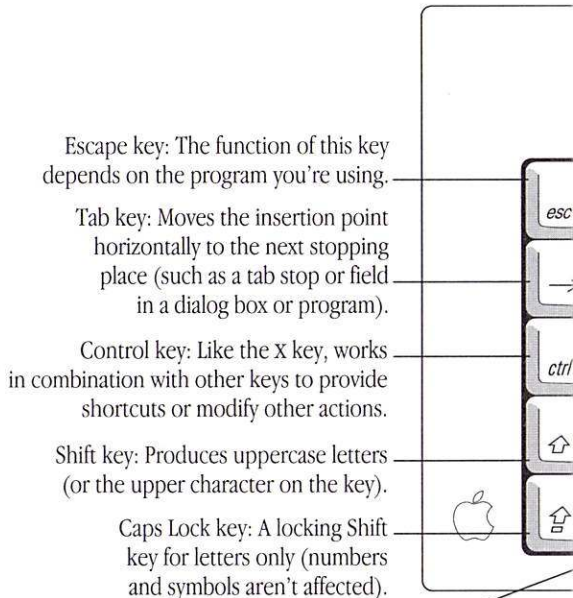
Arrow keys: Move the insertion point, as an alternative to using the mouse. In some programs, the arrow keys have other functions.

Clear key: Deletes the current selection, just as the Delete key does. In some programs, Clear has other functions.

Enter key: In a dialog box, pressing Enter is the same as clicking the outlined button (or pressing Return); some programs require that you use Enter (not Return) to confirm information you have provided.

Apple Keyboard

This keyboard has no height adjustment.



Escape key: The function of this key depends on the program you're using.

Tab key: Moves the insertion point horizontally to the next stopping place (such as a tab stop or field in a dialog box or program).

Control key: Like the X key, works in combination with other keys to provide shortcuts or modify other actions.

Shift key: Produces uppercase letters (or the upper character on the key).

Caps Lock key: A locking Shift key for letters only (numbers and symbols aren't affected).

Option key: Produces special characters when pressed in combination with other keys; also modifies other actions.

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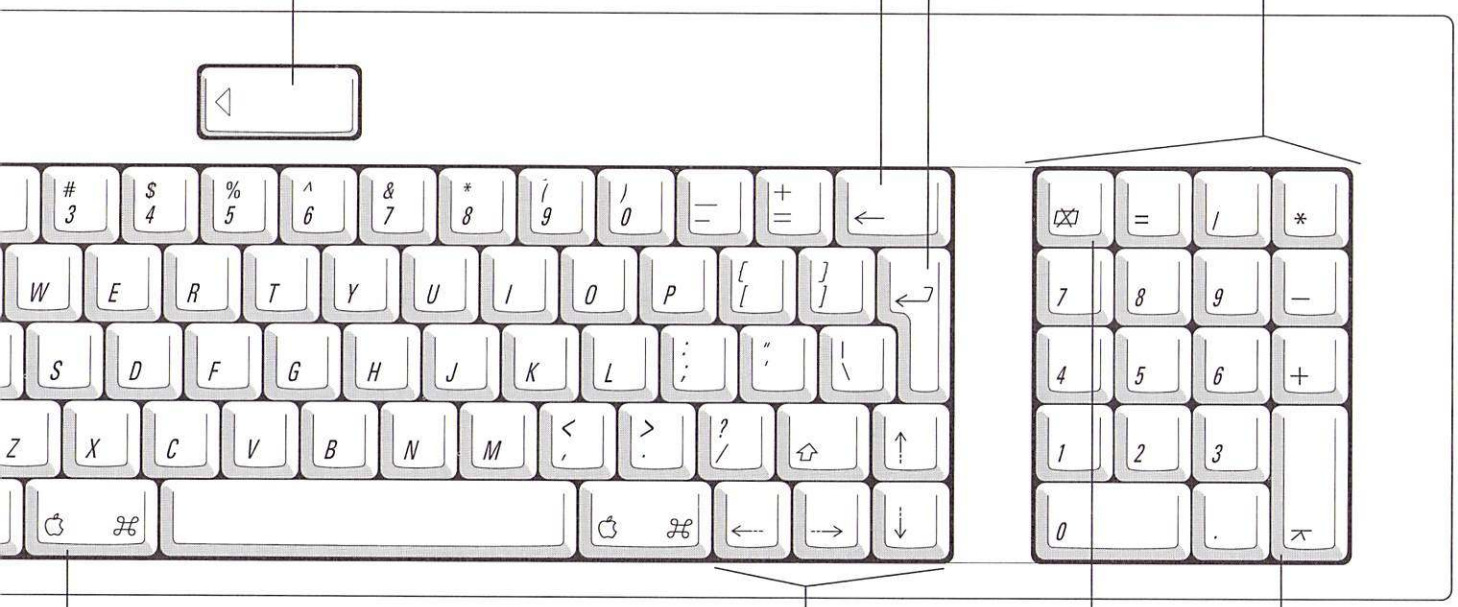
Power On key: On Macintosh II models, pressing this key turns on the computer.

Delete key: Deletes any material currently selected, or whatever character is to the left of the insertion point.

Return key: Moves the insertion point to the beginning of the next line. In a dialog box, pressing Return is the same as clicking the outlined button.

Numeric keys: These keys produ numbers and mathematical symbols; some programs allow you to use these keys as functio keys to initiate an action.



es with ative to and or nceling ogress, rinting.

Arrow keys: Move the insertion point, as an alternative to using the mouse. In some programs, the arrow keys have other functions.

Clear key: Deletes the current selection, just as the Delete key does. In some programs, Clear has other functions.

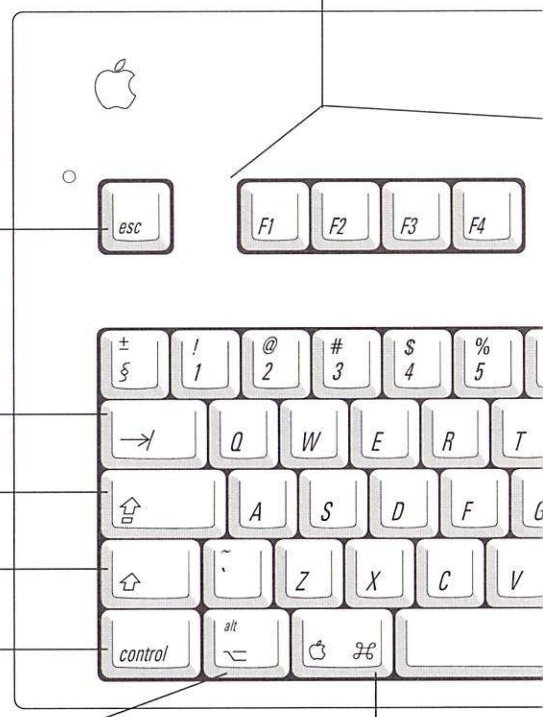
Enter key: In a dialog box, pre Enter is the same as clicking tl button (or pressing Return); s programs require that you use (not Return) to confirm inforr you have provided.

Apple Extended Keyboard II

A reversible plastic template that comes with this keyboard fits over the row of function keys. You can label the function keys by writing on the template (in pencil, not pen or marker).

For instructions on adjusting the height of this keyboard, go to Chapter 8, "Setting Up Your Macintosh System."

Function keys: Some programs allow you to use function keys to give commands. You can assign commands or action sequences to function keys with special utility programs.



Escape key: The function of this key depends on the program you're using.

Tab key: Moves the insertion point horizontally to the next stopping place (such as a tab stop or field in a dialog box or program).

Caps Lock key: A locking Shift key for letters only (numbers and symbols aren't affected).

Shift key: Produces uppercase letters (or the upper character on the key).

Control key: Like the ⌘ key, works in combination with other keys to provide shortcuts or modify other actions.

Option key: Produces special characters when pressed in combination with other keys; also modifies other actions.

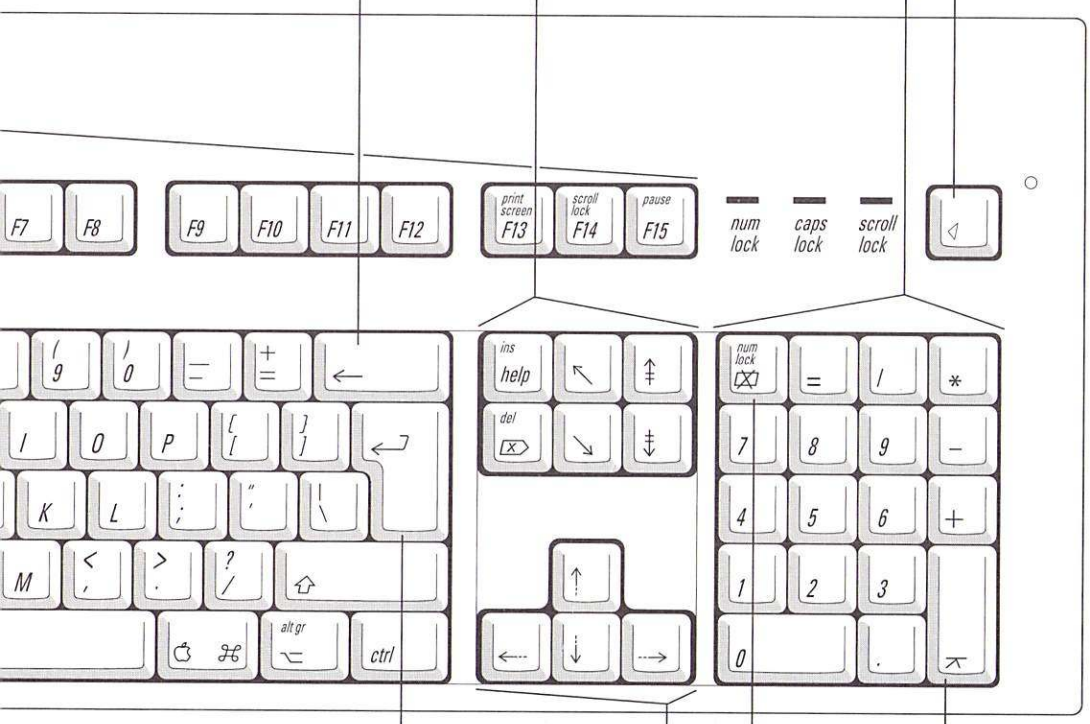
⌘ (Command) key: Combines with another key as an alternative for choosing a menu command or (in some programs) canceling an operation in progress, such as printing.

Delete key: Deletes any material currently selected, or whatever character is to the left of the insertion point.

Special keys: The function of these keys depends on the operating system and program you're using.

Numeric keys: These keys produce numbers and mathematical symbols.

Power On key: One some models of the Macintosh, you press this key to turn on your system.



Return key: Moves the insertion point to the beginning of the next line. In a dialog box, pressing Return is the same as clicking the outlines button.

Arrow keys: Move the insertion point, as an alternative to using the mouse. In some programs, the arrow keys have other functions.

Clear key: Deletes the current selection, just as the Delete key does. In some programs, Clear has other functions.

Enter key: In a dialog box, pressing enter is the same as clicking the outlined button (or pressing Return); some programs require that you use Enter (not Return) to confirm information you have provided.

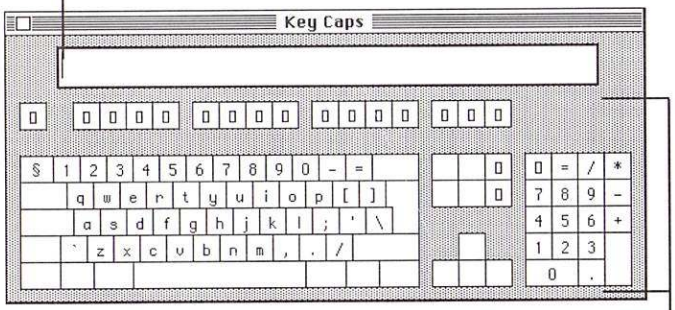
REFERENCE

Typing non-English characters and special symbols

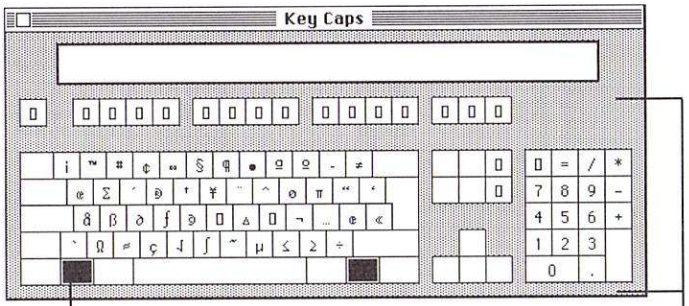
You can type a variety of non-English characters (with diacritical marks) and special symbols by pressing the modifier keys (such as Shift, Option, and Control) in combination with certain letter and number keys.

The Key Caps program, which is installed with the system software, shows you the characters produced when you type certain keys and key combinations in the fonts you have (choose Key Caps from the Apple menu, then choose the font from the Key Caps menu).

Characters appear here when you press keys on the keyboard or click them in the window.



Characters available in the Monaco font (on the Apple Extended Keyboard II)



The highlighted key represents the key held down on the keyboard—in this case, the Option key.

Special characters available in the Monaco font when the Option key is pressed.

To type a character with a diacritical mark (such as an acute accent or an umlaut), you press the Option key with a specific letter key, then you type the character.

Diacritical mark	Key combination
Grave accent (`)	Option-` , then type the character
Acute accent (´)	Option-e, then type the character
Circumflex (^)	Option-i, then type the character
Tilde (~)	Option-n, then type the character
Umlaut (¨)	Option-u, then type the character
The letter *c* with a cedilla (ç)	Option-c

If the character appears *after* the diacritical mark (rather than with it), then the marked character is not available in the font you're using.

Appendix B

Exchanging Disks and Files With MS-DOS and Apple II Computers

Apple File Exchange is a file format conversion program that is supplied on the system software floppy disks. The program and three special *translator* files are stored in the Apple File Exchange Folder.

You can use the program to initialize a disk in MS-DOS or ProDOS (Apple II) format and convert files to and from MS-DOS or ProDOS. (Apple File Exchange cannot open converted files; you need to use an application program that recognizes the converted files to open them.)

Apple File Exchange

Initializing a disk in MS-DOS or ProDOS format

1. **Locate the Apple File Exchange icon and open it.**

   Apple File Exchange is supplied on the system software disks.

   The program's window opens. The contents of the active window are listed on the left side and an empty box appears on the right side.

2. **Place a blank disk in your floppy disk drive.**

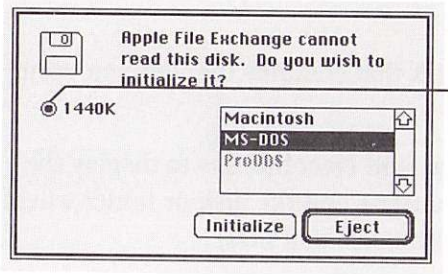
   A dialog box appears, reporting that the program can't read the disk and asking if you want to initialize it. This dialog box shows the names of formats available in Apple File Exchange, including Macintosh, MS-DOS, and ProDos.

   (You can initialize a disk that is not blank by inserting it, clicking the Drive button until its name appears in the window, and choosing Erase Disk from the File menu.)

3. **Click MS-DOS or ProDOS.**

4. **If necessary, click the capacity (in K) of the disk you inserted.**

   If you want to initialize a high-density disk in MS-DOS format, 1440K is the only option and is already selected. If you inserted a double-sided disk, click 720K.



Disk capacity is the same for Macintosh and MS-DOS high-density disks.

5. **Click the Initialize button.**

   When initialization is completed, a dialog box appears, asking you to name the disk.

6. **Type a name for the disk, then click OK.**

   MS-DOS file names can have up to eight characters, followed by an optional period and up to three characters.

   The dialog box closes, and the name of the disk you initialized appears, above an empty window. This disk's icon doesn't appear on your Macintosh screen (because the Macintosh cannot recognize a disk in MS-DOS or ProDOS format).

7. **Choose Quit from the File menu when you are finished using Apple File Exchange.**

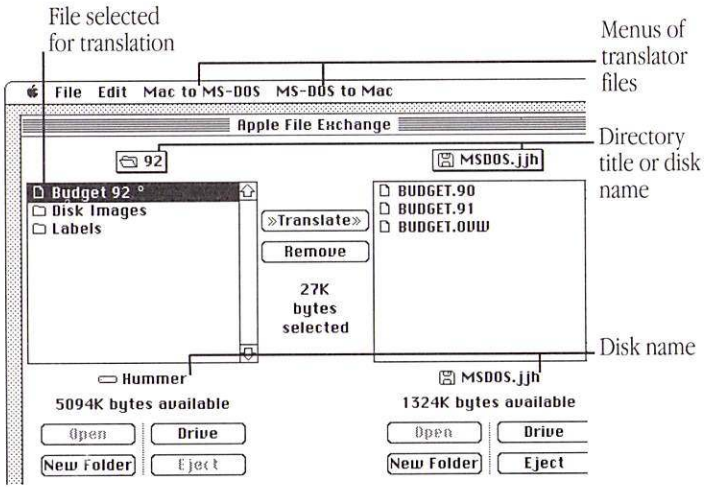
Apple File Exchange cannot initialize a high-density disk in 720K format, nor can it read a double-sided disk that has been initialized in the high-density (1.4 MB) format.

❖ *5.25-inch disks:* Some Macintosh models can use an external 5.25-inch floppy disk drive that can read files from MS-DOS disks. An internal adapter or expansion card is required to connect a 5.25-inch disk drive to the Macintosh. Apple File Exchange can translate files from these disks and store files on them. ❖

Converting files to and from MS-DOS or ProDOS format

Apple File Exchange provides two methods of file conversion—text and binary. You use text translation for text files, and binary translation for other files.

In addition, Apple File Exchange can use special translator files designed to convert files into formats that specific programs can use. One of these special translator files is provided with Apple File Exchange: DCA-RFT/MacWrite, which converts documents between MacWrite® format for the Macintosh and Document Content Architecture/Revisable Form Text format (used by many word-processing programs) for MS-DOS.



Follow these steps to translate a file:

1. **Locate the Apple File Exchange icon and open it.**

   Apple File Exchange is supplied on the system software disks.

   The program's window opens. The contents of the active window are listed on the left side and an empty box appears on the right side.

2. **Insert the floppy disk that contains the files you want to translate.**

3. **Use the Open, Drive, and Eject buttons to display the files you want to translate and the disk or folder where you want to store the translated files.**

4. **Click the names of the files or folders you want to translate.**

   To select multiple files or folders, hold down the Shift key and click each name. You may have to scroll to locate the names of some files or folders.

   The appropriate translation menus (one for translating from Macintosh format and another for translating to Macintosh format) appear on the menu bar when you select either MS-DOS or ProDOS files.

5. **Open the translation menu you want by pressing its name.**

6. **Make sure that the translators for the types of files you've selected have checkmarks; if not, choose them so that checkmarks appear next to them.**

   An active translator has a checkmark. The default translator has a diamond (indicating that it's always active). Choosing an active translator makes it inactive.

7. **Compare the size of the files or folders selected for translation with the space available on the destination disk.**

   The total space required appears between the lists; the space available on the destination disk appears below its name.

   If the size of the selected items is greater than the space available on the destination disk, deselect some of the items (by Shift-clicking them), remove some files on the destination disk (using the Remove button), or change to another destination disk (using the Eject button).

8. **Click the Translate button.**

   If Apple File Exchange finds two or more active translators—other than Text or Default—capable of translating a selected file, it presents a dialog box asking you to select the translator you want.

   If the names of files or folders on the destination disk are the same as those of files or folders being translated, Apple File Exchange presents a dialog box asking you to rename the file being translated.

   If a translator requires you to select options before a file is translated, it presents a dialog box in which you select the options.

9. **Respond to any dialog boxes presented by selecting a translator, renaming the file, or selecting options.**

   The selected files or folders are translated. Messages report the status of copying.

   If Macintosh files are being translated into MS-DOS files, the names of translated files may be shortened to conform to the naming conventions of MS-DOS.

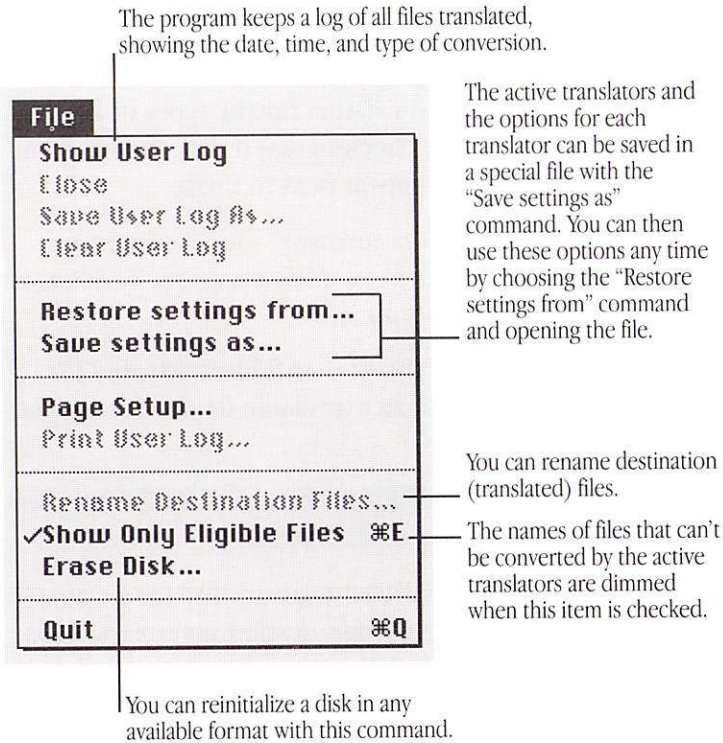
continues ▶

10. When all translations are finished, choose Quit from the File menu.

- *Converting MS-DOS files on a file server:* Some file servers can store information created by both Macintosh computers and MS-DOS computers. For example, the AppleShare PC program allows MS-DOS computers to store and translate files on an AppleShare file server. Consult your authorized Apple dealer or representative for more information about using a file server and MS-DOS files. ❖

Other file-conversion options

Apple File Exchange's File menu provides several other options to assist you with file conversions.



More information about Apple File Exchange options

To see explanations of the translators Apple File Exchange uses, choose About the Apple File Exchange from the Apple menu. Select a translator in the list that appears, then click the About button for information about that item. (Click Done to return to the program's window.)

Appendix C

Where to Get More Information About Your Macintosh

As you increase your knowledge of computers and develop new uses for your Macintosh, you may want to know what other Macintosh users in your area are doing with their computers, or you may want to learn more about programming, hardware design, or other technical topics.

The information in this appendix provides a starting point for you to expand your Macintosh knowledge and contacts.

Macintosh user groups

Whatever your level of computer experience, you can get lots of support by joining a Macintosh user group. Macintosh user groups are composed of people who work with Macintosh computers and who enjoy sharing what they know with others. Activities may include demonstrations of new products, question-and-answer sessions, and classes on using popular programs or learning to write your own programs. Many user groups have special beginners' meetings.

Ask your authorized Apple dealer for the name of the Macintosh user group nearest you, or call 800-538-9696. For names of user groups outside the United States, or if you're interested in starting your own user group, contact

Berkeley Macintosh User's Group
1442-A Walnut Street, #62
Berkeley, CA 94709
U.S.A.
415-549-BMUG (415-549-2684)

or

Boston Computer Society
One Center Plaza
Boston, MA 02108
U.S.A.
617-367-8080

Technical information

A variety of technical documentation is available for the Macintosh. Apple Computer releases technical information through three primary outlets: the Apple Technical Library and the Apple Communications Library, both published by Addison-Wesley Publishing Company, and the APDA developers' source.

Apple Technical Library

The Apple Technical Library includes comprehensive technical documentation for all Macintosh computer models and the multivolume guide to the Macintosh operating system for all models, *Inside Macintosh.*

Other books in the Apple Technical Library cover designing expansion cards and programming device drivers for the Macintosh, writing application programs for the Macintosh, and designing the user interface for Macintosh programs.

You'll find the Apple Technical Library in most well-stocked bookstores.

Apple Communications Library

The Apple Communications Library offers complete technical information about Macintosh communications products and the Macintosh in a network environment. The library includes an introductory volume, *Understanding Computer Networks,* and the comprehensive guide to the AppleTalk network system, *Inside AppleTalk.*

The books in the Apple Communications Library are available at bookstores.

APDA

APDA offers convenient worldwide access to over 300 development tools, resources, training products, and information for anyone interested in developing applications on Apple platforms. Customers receive the quarterly APDA Tools Catalog featuring all of our most popular and most current versions of Apple and third-party development tools. Ordering is easy; there are no membership fees and application forms are not required for most of our products. APDA offers convenient payment and shipping options, including site licensing.

To order product or get additional information, contact:

APDA
Apple Computer, Inc.
20525 Mariani Avenue, M/S 33-G
Cupertino, CA 95014-6299
U.S.A.

800-282-2732 (United States)
800-637-0029 (Canada)
408-562-3910 (International)
Fax: 408-562-3971
Telex: 171576
AppleLink: APDA

Assistance for hardware and software developers

If you plan to develop hardware or software products for sale through retail channels, you can get valuable support from Apple Developer Programs. Write to

Apple Developer Programs
Apple Computer, Inc.
Mailstop 51-W
20525 Mariani Avenue
Cupertino, CA 95014-6299

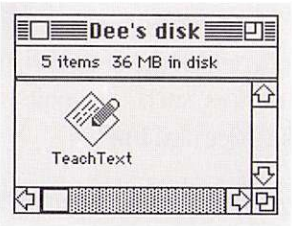
Glossary

A

access privileges The ability to see folders, see files, or make changes to a shared disk or folder. Access privileges are granted by the owner of the shared item and are used to determine what other network users can do with the disk or folder and its contents.

active program The program you're currently using. You can have several programs open at a time, but only one of them is the active program. Open programs appear in the Application menu at the right end of the menu bar, with a checkmark next to the name of the active program. The menu icon changes to indicate which program is the active program.

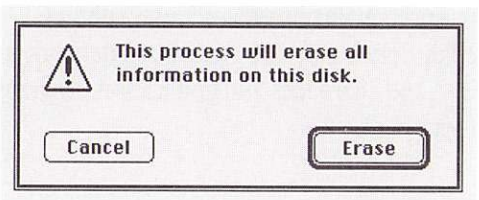
active window The window that's on top of all others on the Macintosh desktop. The active window has solid lines running across its title bar and it "belongs" to the active program.



ADB See **Apple Desktop Bus.**

Alarm Clock A desk accessory program (an Apple menu item) that works like a digital alarm clock.

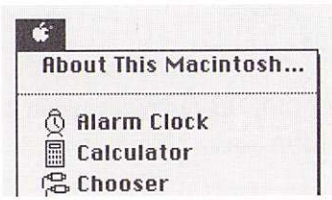
alert box A box that appears on the screen to give a warning or other message, sometimes accompanied by an alert sound.



alias A file that stands for and points to a file, folder, or disk that you use as if it were the original. When you open an alias, you're actually opening its original.

Apple Desktop Bus (ADB) Input circuitry built into most Apple computers. You use ADB ports (marked with the ADB icon) to attach the keyboard, the mouse, and other devices, such as graphics tablets and bar-code readers. See also **bus.**

Apple menu The menu at the left end of the menu bar, indicated by the Apple symbol. You choose items from this menu to get information about programs' memory use and open items placed in the Apple Menu Items folder (in the System Folder).



AppleShare file server A Macintosh computer running AppleShare File Server software that allows network users to store, retrieve, and share files and application programs on that computer.

AppleTalk network A combination of devices, cables, and software that operate according to the protocols (rules) developed by Apple Computer. A communications environment in which many different kinds of computers, peripherals, and software can work together. Uses LocalTalk, EtherTalk, or TokenTalk network connection types.

Application menu The menu at the right end of the menu bar (its icon changes to indicate which program is the active program). You choose items from this menu to hide windows belonging to open but inactive programs and to make an open program the active program. See also **active program.**

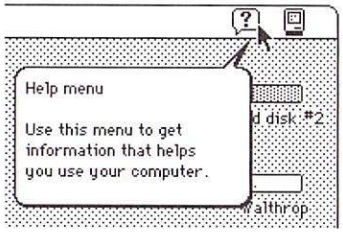
application program A program that you use to do your work on the computer, such as word processing, database management, graphics, or telecommunication.

B

back panel The back of the computer, where you find the power switch and ports for attaching external devices.

back up To make a copy of a disk or of a file on a disk. Backing up your files and disks ensures that you won't lose information if the original is lost or damaged.

balloons Small boxes containing text identifying objects on the screen and explaining their use. You can hide or show balloons by choosing the appropriate command from the Help menu.



bit Binary digit. The smallest unit of information that a computer can hold. The value of a bit (either 1 or 0) represents a two-way choice (on or off, true or false, black or white).

bitmap A set of bits that represents a graphic image.

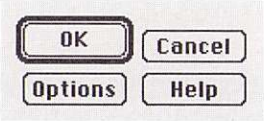
bitmapped character A character in a font that's rendered as a bitmap and drawn as a pixel pattern on the screen. See also **font, pixel.**

bitmapped font A font in a single point size made up of bitmapped characters (also called fixed-size font). Some fonts stored in the Macintosh System file are bitmapped fonts. Compare **outline font, TrueType font.**

buffer A "holding area" in memory where information can be stored by one program or device and then read by another. For example, some printers have built-in memory to store text that comes from the computer faster than it can be printed. This memory, which frees the computer for other work while the printer is printing, is called a *print buffer.*

bus Circuits inside the computer that transmit information from one part of a computer system to another. For example, the Apple Desktop Bus transmits information about mouse movement or keyboard input. In a network, a bus is a line of cable with connectors that link devices together.

button An image, sometimes resembling a pushbutton, that you click to designate, confirm, or cancel an action. Compare **mouse button.**



byte A unit of information consisting of a fixed number of bits. One byte usually consists of a series of eight bits. See also **kilobyte, megabyte.**

C

cache See **memory cache, disk cache.**

Cancel button A button that appears in most dialog boxes. Clicking it cancels any command or options you might have chosen and closes the dialog box.

central processing unit (CPU) The "brain" of the computer; the microprocessor that performs the actual computations. See also **processor, coprocessor.**

character Any symbol that has a widely understood meaning and thus can convey information (letters, numerals, punctuation marks, and other symbols).

checkbox A small box associated with an option in a dialog box or window. You click the checkbox to turn the option on or off. An option is "on" when there's an X in the checkbox.

chip See **integrated circuit.**

choose To give a command by dragging through a menu and releasing the mouse button when the command is highlighted.

Chooser A program that lets you designate devices, such as printers and shared disks on a network, for your Macintosh to use.

Clear A command in the Edit menu that removes selected material without placing it on the Clipboard. You can use the Undo command immediately after using Clear if you change your mind. Compare **Cut.**

click To position the pointer on an object on the screen, and then to press and quickly release the mouse button.

Clipboard An area in the computer's memory that functions as a holding place for what you last cut or copied. Information on the Clipboard can be pasted into documents.

close box The small box on the left end of the title bar of an active window. Clicking it closes the window.

color wheel Available on computers with color capability, the color wheel dialog box lets you adjust hue, saturation, and brightness of the highlight color and other color choices. It is also used to adjust shades of gray.

command An instruction that causes the computer to perform some action.

configuration (1) The way you have your computer set up. (2) The combined hardware components—computer, monitors, keyboard, and peripheral devices—that make up a computer system. (3) The software settings that allow various hardware components of a computer system to communicate with each other.

control panels Programs that let you change various Macintosh features, such as sound, mouse movement, and keyboard options. Control panels are located inside the System Folder.

coprocessor An auxiliary processor designed to relieve the demand on the main processor by performing a few specific tasks. Generally, coprocessors handle tasks that would be performed much more slowly by the main processor, such as mathematical calculations.

Copy A command in the Edit menu that copies selected material and places it on the Clipboard, without removing the material from the original document. See also **Clipboard.**

copy-protect To make a disk difficult if not impossible to copy. Software publishers sometimes copy-protect their disks to prevent them from being illegally duplicated. See also **lock.**

CPU See **central processing unit.**

current application See **active program.**

current startup disk The disk that contains the System Folder the computer is currently using. The startup disk icon appears near the upper-right corner of the desktop.

cursor See **pointer.**

Cut A command in the Edit menu that removes selected material and places it on the Clipboard; from there you can paste it elsewhere. Compare **Clear.** See also **Clipboard.**

cut and paste To move text, graphics, or other material from one place in a document to another place in the same or a different document.

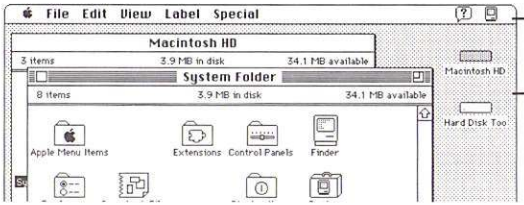
D

default A value, action, or setting that a computer system assumes, unless you give it a different instruction. (Also called *preset.*)

deselect To change a selected item, such as an icon, so that it is no longer selected. In the Finder, you deselect highlighted icons by pressing the Shift key and clicking the icon you want to deselect, or by selecting something else.

desk accessories Small application programs that you can add to your system. Desk accessories (DAs) are often installed in the Apple menu. Those provided with the Macintosh include the Alarm Clock, the Calculator, the Chooser, control panels, Key Caps, and the Scrapbook.

desktop Your working environment on the computer (the menu bar and the background area on the screen), on which you work with icons and windows.

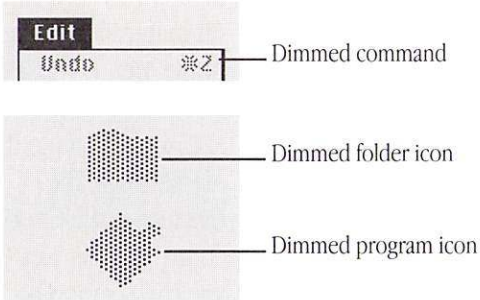


destination The disk or folder that receives a copied or translated file, as in *destination disk.*

GLOSSARY

dialog box A box that contains a message, often requesting more information from you or allowing you to select options.

dimmed Gray or filled in with a pattern of dots, indicating that an icon is already open or a menu, menu item, or other option is not available.



directory A list of the contents of a folder or a disk.

directory dialog box A dialog box that lets you see the contents of disks and folders so that you can save a document in a particular folder or disk, or open a document that's in a particular folder or disk. A directory dialog box appears when you choose Save or Open from a program's File menu.

disk A flat, circular object with a magnetic surface that computers use to store files (programs and documents). The files are stored as magnetic signals, similar to the way sounds are recorded on tape. See also **floppy disk, hard disk.**

disk cache A portion of the computer's random-access memory (RAM) that is set aside for programs to store frequently used instructions. You use the Memory control panel to adjust the size of the disk cache. Compare **memory cache.**

disk capacity The maximum amount of data a disk can hold, usually measured in megabytes (MB) or kilobytes (K).

disk drive The device that holds a disk, retrieves information from it, and stores information on it.

document Whatever you create with an application program. See also **file.**

double-click To position the pointer on an object, such as an icon, and then to press and release the mouse button twice in quick succession without moving the mouse.

drag To position the pointer on an object, press and hold the mouse button, move the mouse, and release the mouse button.

driver A program that the computer uses to direct the operation of a peripheral device, such as a printer or scanner. (Also called a *resource.*)

drop folder A shared folder with access privileges that don't allow network users to open it but do allow network users to place files or folders into it.

E

Easy Access A control panel that you use to adjust the keyboard so that you can control the pointer from the numeric keypad, type keyboard shortcuts without having to press the keys at the same time, and type very slowly. You also can make these keyboard adjustments without opening the control panel.

Edit menu A menu that is available in most programs and lists editing commands—such as Cut, Copy, and Paste.

eject To remove a disk from a disk drive.

error message A message displayed on the screen that tells you of an error or problem in a program or in your communication with the computer system.

Ethernet A high-speed, widely used network type.

EtherTalk A type of network connection (provided by EtherTalk software installed in your Macintosh) that allows you to use AppleTalk network services on an Ethernet network.

Everyone A category of users for whom you can set access privileges to shared folders and disks. The category refers to anyone who connects to a computer as a guest or registered user.

expansion card A removable circuit board that plugs into one of the expansion slots in some models of Macintosh computers. Expansion cards enable the computer to use a special device or to perform an additional function.

expansion slot A long, rectangular socket on the main circuit board of some Macintosh models into which you can install an expansion card that gives the computer additional capabilities.

extension See **system extension.**

F

file Any named, ordered collection of information stored on a disk. Application programs and documents are examples of files. You create a file when you type text or draw graphics, give the material a name, and save it on a disk.

File menu A menu that lists commands that affect whole documents and other files—commands such as Save, Print, and Quit.

file server A computer with special software that allows network users to store and retrieve files on the hard disks or other storage devices attached to it.

file sharing The capability of sharing files among computers on a network.

Finder Part of the system software, the Finder is the program

that creates the Macintosh desktop and keeps track of your files.

floppy disk A disk made of flexible plastic that stores computer data. The 3.5-inch disks used in Macintosh floppy disk drives are floppy disks housed in rigid plastic shells for support and protection. Floppy disks come in three types: high-density (1.4 MB capacity), double-sided (800K), and single-sided (400K).

folder A container for documents, programs, and other folders on the desktop or in directory windows.

font A collection of letters, numbers, and symbols in a distinctive typographic design. See also **bitmapped font, outline font, TrueType font.**

This is New York font.

This is Geneva font.

format See **initialize.**

G

guest A person that connects to another computer on a network without having to give a name or password.

guest access A type of access to a computer that permits any network user to connect to the computer for the purpose of file sharing or program linking. Each Macintosh owner can control whether guest access is allowed on that computer.

group A set of registered users on a network for whom you set access privileges as a unit. Groups are a convenient way for a person who is sharing files to control access privileges for a number of users at once.

H

hard disk A disk made of metal and permanently sealed in a disk drive or cartridge. A hard disk can hold much more information than a floppy disk, and a hard disk spins much faster.

highlighted Visually distinct, usually because the colors are reversed.

I, J

I-beam A type of pointer shaped like the capital letter I, used for entering and editing text. See also **insertion point.**

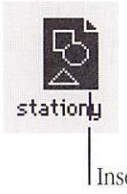
I-beam

icon A small pictorial representation of a file, disk, menu, option, or other object or feature.

initialize To prepare a disk to receive information by organizing its surface into tracks and sectors; also known as *format.* If you initialize a disk with information on it, the information is erased.

input Information transferred into a computer from some external source, such as the keyboard, the mouse, a disk drive, or a modem. Compare **output.**

insertion point The place in a document where text you type will be added; you set it by clicking at the spot where you want to make the insertion. The insertion point is marked with a blinking vertical bar.



Installer A program that you use to install or update your system software or to add resources such as networking software.

integrated circuit (IC) An electronic circuit entirely contained in a single piece of semiconducting material, usually silicon. Often referred to as a *chip.*

interface The way a computer communicates with external devices, such as a printer (through its printer port, or printer interface), or with you (through its user interface or human interface).

K

K See **kilobyte.**

keyboard equivalent See **keyboard shortcut.**

keyboard shortcut A combination of key presses that you can use to give a command or set an option. Keyboard shortcuts always involve the use of at least one modifier key, such as the ⌘ key or the Option key.

Key Caps A desk accessory that shows you the characters available for each font in your system.

kilobyte 1024 bytes. See also **byte, megabyte.**

L

label A word or short phrase that you can assign to an icon by using the Label menu. (You can also assign the color that's associated with a label if your Macintosh displays color.) You can change labels and their associated colors in the Labels control panel.

LocalTalk A built-in network connection that allows a Macintosh computer to participate on an AppleTalk network.

LocalTalk cable system A system of cables, cable extenders, and connector boxes that connect computers and network devices to an AppleTalk network system.

lock To prevent files or disks from being changed or deleted (but they can still be opened or copied).

M

main logic board A circuit board that holds RAM, ROM, the microprocessor, custom integrated circuits, and other components that make the computer work.

main memory See **random-access memory.**

megabyte (MB) 1024 kilobytes, or 1,048,576 bytes. See also **byte, kilobyte.**

member A registered user on a network who belongs to a group.

memory A hardware component of a computer system that can store information for later retrieval. See also **main memory, random-access memory, read-only memory.**

memory cache Memory that is set aside to increase the efficiency and operating speed of the computer. Compare **disk cache.**

menu A list of items from which you can choose. Menus commonly appear when you press menu names in the menu bar or in a dialog box. You choose a command by dragging through the menu and releasing the mouse button when the command you want is highlighted. See also **pop-up menu.**

menu bar The white strip across the top of your screen that contains the names of the menus available to you.

menu name A word, phrase, or icon in the menu bar or in a dialog box that gives you access to the menu. Pressing the menu name opens the menu.

modem Short for *modulator/demodulator.* A device that links your computer to other computers and information services over telephone lines.

modem port A socket on the computer's back panel marked by a telephone icon, used to connect a modem to your Macintosh.

monitor See **video monitor.**

mouse A device that controls the pointer on the screen.

mouse button The mechanical button on top of the mouse. In general, pressing the mouse button initiates some action on whatever is under the pointer on the screen, and releasing the button confirms the action.

Mouse Keys An Easy Access feature that lets you use keys on the numeric keypad to control the pointer.

MS-DOS Microsoft Disk Operating System, a commonly used computer operating system.

N

network A collection of devices such as computers and printers that are connected together. A network is a tool for communication that allows users to store and retrieve information, share printers, and exchange information.

network administrator A person responsible for setting up, maintaining, or troubleshooting your network.

network service A capability such as file service or print service provided by special software on the network.

network user A person whose computer is connected to a network.

Note Pad A desk accessory that lets you enter and edit small amounts of text.

NuBus An address bus and data bus used in the Macintosh II family and some other Macintosh computers. NuBus lets you add a variety of components to the computer system, through expansion cards installed in NuBus expansion slots inside the computer. See **expansion slot.**

numeric keypad A calculator-style keypad, to the right of the alphabet keyboard, that you can use to type numbers. Some application programs designate the keys on the numeric keypad as function keys.

O

open To make available. You open files in order to work with them. Opening an icon usually causes a window to appear, revealing the document or application program the icon represents or showing you the contents of a folder or disk.

operating system A program that organizes the internal activities of the computer and its peripheral devices. An operating system performs basic tasks such as moving data to and from devices and managing information in memory.

outline font A font that describes each character mathematically as a set of formulas. The mathematical description adjusts itself to render the character in different sizes. See also **TrueType font, bitmapped font, font.**

output Information transferred from the computer's microprocessor to some external device, such as the screen, a disk, a printer, or a modem. Compare **input.**

owner The owner of a Macintosh is named in the Sharing Setup control panel. On a network, the owner of a shared folder or disk is named in the Sharing dialog box, identifying the person who can set or change the access privileges assigned to the shared item.

owner name The name of the owner of a shared folder or disk that appears in the Sharing dialog box. The owner can be the Macintosh owner, a registered user, or a registered group. The owner can set or change the access privileges of the shared item.

P, Q

password A unique word or set of characters that must be entered before a network user can gain access to a computer that he or she is registered on.

Paste A command in the Edit menu that places the contents of the Clipboard—whatever was last cut or copied—at the location of the insertion point. See also **Clipboard.**

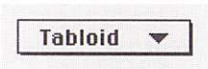
peripheral device A piece of hardware—such as a monitor, disk drive, printer, or modem—used with a computer and under the computer's control.

PICT A file format used by a number of graphics and page layout programs.

pixel Picture element. The smallest dot that the computer and monitor can display, or the representation on the screen of the value of a bit. Also, a location in video memory that corresponds to a pixel on the screen. See also **bit.**

pointer An arrow or other symbol on the screen that moves as you move the mouse.

pop-up menu A menu (usually in a dialog box) in which the selected option is shown next to a solid triangle and inside a box with a shadow around it. The rest of the menu "pops up" when you press the box. Compare **pull-down menu.**



port A socket on the back panel of the computer where you can plug in a cable to connect the computer to another device.

printer port A socket on the computer's back panel marked with a printer icon, used to connect a printer or an AppleTalk network connector to the computer.

privilege See **access privileges.**

processor The computer hardware component that performs the computations directed by software commands. In microcomputers such as the Macintosh, the processor is a single integrated circuit called a microprocessor. See also **central processing unit.**

program A set of instructions describing actions for a computer to perform to accomplish a task, conforming to the rules and conventions of a particular programming language. Computer programs are collectively referred to as software. See also **application program.**

program linking The ability of an application program to exchange information directly with another program over a network. To use program linking, both programs must have the capability.

pull-down menu A menu (usually in the menu bar) whose name or icon is shown. You "pull down" the menu by pressing the name or icon. Compare **pop-up menu.**

R

RAM See **random-access memory.**

random-access memory (RAM) The part of a computer's memory available for programs and documents, also known as main memory. The contents of RAM are lost when the computer is turned off. Compare **read-only memory.**

Read Me document A document that is included on some application program and system software disks to provide you with late-breaking information about the product.

read-only memory (ROM) Memory whose contents the computer can read, but not change. Information is placed into read-only memory only once, during manufacturing. The contents of ROM are not erased when the computer's power is turned off. Compare **random-access memory.**

registered group A group of registered users that is listed on a computer on a network.

registered user A network user whose name and password are listed on a computer on the network. Usually, registered users have greater access privileges to shared folders and disks than do guest users.

resource A file that is contained in the System Folder and that the computer uses for its operations. System files and device drivers are examples of resources.

RGB monitor A type of color monitor that receives separate signals for each primary color (red, green, and blue) and uses these signals to display color images.

ROM See **read-only memory.**

S

save To store information by transferring it from main memory (RAM) to a disk. Work that is not saved disappears when you turn off the computer or if the power is interrupted.

scanning order The order in which the Macintosh searches the disk drives for a startup disk. See also **startup disk.**

Scrapbook A desk accessory in which you can save frequently used pictures or passages of text. The Scrapbook can store multiple images. You can cut or copy images from the Scrapbook and paste them into documents created with most application programs. Compare **Clipboard.**

scroll To move a document or directory in its window so that a different part of it is visible. You scroll using the scroll arrows, scroll bars, or scroll box.

SCSI See **Small Computer System Interface.**

SCSI cable terminator A device used in a SCSI chain to maintain the integrity of the signals going through the chain. With some devices, such as the Apple internal hard disk, the terminator is built in.

SCSI chain A group of SCSI devices linked to one another through SCSI peripheral cables and linked to the SCSI port on the computer through a SCSI system cable.

SCSI port The socket on the back panel of the computer to which you connect SCSI devices.

select To designate which object will receive the next action you take. Selecting is usually done by clicking or dragging.

selection The selected object or objects. A selected object is usually highlighted.

serial ports The connectors for peripheral devices that receive data in a serial format (that is, one bit at a time). The printer and modem ports on the Macintosh are serial ports.

shared disk A hard disk, CD-ROM disc, or other medium whose contents can be retrieved over the network. A disk can be shared by a file server or a Macintosh computer that has file sharing turned on.

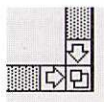
shared folder A folder that is available to some or all network users over the network.

Shift-click To click the mouse button while holding down the Shift key, used to extend or shorten a selection and to select more than one item.

Shift-drag To drag while holding down the Shift key, used to select two or more groups of objects by holding down the Shift key while you drag diagonally to enclose each group of objects in a rectangle.

SIMM Single In-line Memory Module, a circuit board that contains eight RAM chips. SIMMs are connected to SIMM sockets on the computer's main circuit board. See also **random-access memory.**

size box A box on the bottom-right corner of the active window. Dragging the size box resizes the window.



Slow Keys An Easy Access feature that lets you set a delay before each keystroke is accepted by the computer.

Small Computer System Interface (SCSI) A specification of mechanical, electrical, and functional standards for connecting peripheral devices such as hard disks, printers, and optical disks to small computers.

sound output port A socket on the back panel of the Macintosh marked with a speaker icon, used to connect headphones or speakers to your Macintosh.

source The disk or folder that holds the original of a file to be copied or translated, as in *source disk.*

startup disk A disk with all the necessary program files—such as the Finder and System files contained in the System Folder—to set the computer into operation.

startup drive The disk drive from which you start up your computer system. The disk in this drive must contain a System Folder.

stationery A document that serves as a template. When you open a stationery document, a copy of the document is created and opened. The original remains unchanged.

Sticky Keys An Easy Access feature that lets you type combination keystrokes without actually pressing the keys simultaneously.

system extension A program that expands the capabilities of system software (for example, device drivers). System extensions are stored in the Extensions folder in the System Folder.

System file The file that Macintosh computers use to start up and to provide systemwide information, including fonts, sounds, and keyboard layouts. The System file must be in the System Folder.

System Folder A folder containing the programs that Macintosh computers use to start up and operate. A disk that contains a System Folder is a startup disk.

system software Software components that support application programs by managing system resources (such as memory) and input and output devices. Also known as the *operating system.*

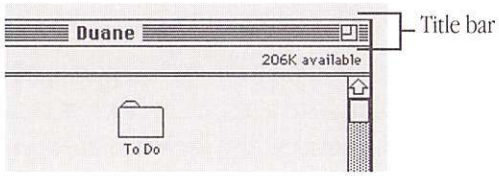
T

TeachText A program provided with the Macintosh system software that functions as a limited word-processing program, used primarily to open Read Me documents.

terminator See **SCSI cable terminator.**

3.5-inch disk A flexible, plastic disk measuring 3.5 inches in diameter encased in a rigid plastic shell. These disks come in three types: high-density (1.4 MB capacity on the Macintosh), double-sided (800K), and single-sided (400K). See also **floppy disk.**

title bar The bar at the top of a window that shows the name of the window. When the window is active, the title bar is highlighted with horizontal lines.



Token Ring A widely used network type originally developed by International Business Machines Corporation.

TokenTalk A type of network connection that allows you to use AppleTalk services on a Token Ring network.

TrueType font A type of outline font supplied with the Macintosh system software. See also **outline font.** Compare **bitmapped font.**

U

unlock To allow a locked disk or document to be changed, deleted, or renamed. See also **lock.**

user group A computer club where computer users exchange tips and information.

User/Group A category of users for whom you can set access privileges to shared folders and disks. Can be any user or group that is registered on the computer containing the shared folder or disk.

user interface See **interface.**

user name The name chosen by a Macintosh owner or network administrator to identify a user. After this identification is complete, the user is a registered user and can connect to that computer as such.

V

version A number indicating a program's chronological position relative to previous and subsequent releases of the program.

video monitor A display device that can receive video signals by direct connection. Also known as a *monitor.*

virtual memory Hard disk space set aside and used as an extension of the computer's main memory.

virus A program designed with malicious intent to damage files. Virus programs can be spread though networks and bulletin board services as well as on disks. Virus-detection and -elimination programs are available through dealers and user groups.

volume Space on a hard disk or a file server that's defined and named as a place to store files. A hard disk is usually a single volume, but it can be partitioned into several volumes.

W, X, Y

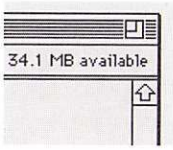
Wastebasket An icon on the desktop that you use to discard programs, documents, and folders.

window A rectangular area that displays information on the desktop. You create and view documents through windows, and you view the contents of disks in windows.

Z

zone Zones are set up by a network administrator and are used to group the devices on the network for easier access.

zoom box A small box in the top-right corner of the title bar of the active window. Clicking the zoom box resizes the window so that you can see all of its contents (if possible); clicking it again returns the window to its previous size.



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